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ANNUAL REPORTS

OF THE

PRESIDENT AND TREASURER

OF

HARVARD COLLEGE.

1877-78.

25

FEB 79
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CAMBRIDGE:
PRESS OF JOHN WILSON AND SON.
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1879.

PRESIDENT'S REPORT FOR 1877-78.

To the Board of Overseers: —

The President of the University has the honor to submit the following Report for the academic year 1877–78; namely, from September 27, 1877, to September 26, 1878: —

During the year, the University lost by death, George Tyler Bigelow, a Fellow of the Corporation, who died on the 12th of April, 1878; Edward Hammond Clarke, a member of the Board of Overseers, who died November 30, 1877; John Eugene Tyler, Professor of Mental Diseases, who died March 9, 1878; and Stacy Baxter, Professor of Elocution, who was drowned in August, 1878, while bathing, at Cape May.

Judge Bigelow had been for ten years (1868–1878) a member of the Corporation. His high reputation as a judge, his legal knowledge, his acquaintance with investments suitable for trust property, and his power of justly weighing public opinion, were of great service to the Board. He discharged his duties as a Fellow with regularity, disinterestedness, dignity, and courtesy. When Judge Bigelow died, the President became the only remaining member of the Corporation as constituted when he entered it in 1869. Since December, 1875, every other member of that Board has been replaced. The President will never cease to remember with gratitude and affection all the members of the Corporation of the years 1868 to 1875, on account of the consideration with which they treated him, when, a very young man, he entered on his responsible duties, and of the encouraging confidence which they always manifested in him.

Dr. Clarke, in his youth a distinguished student of the College, had been for seventeen years (1855–1872) a Professor in the Medical School, and for nearly six years (1872–1878) a member of the Board of Overseers. His services to the University, as a teacher, an Overseer, and a leader in his profession, were of great value; no man in all New England stood higher in the medical profession, and no medical writer in this country has had a wider or more beneficent influence.

Dr. Tyler had been a Professor in the Medical School for seven years (1871–1878). For many years the head of an important institution for the treatment of mental diseases, he was conspicuous for devotion to his work, for kindliness and good sense. As a consulting physician in those maladies which, above all others, call for delicacy and discrimination in him who studies and treats them, and which often bring upon the physician grave responsibilities, Dr. Tyler's discernment, sympathy, patience, and good judgment won general confidence, and gave authority to his opinions. For his position in the Medical Faculty he was especially fitted; and his death was a serious loss both to the School and the public.

Professor Baxter was appointed Professor of Elocution in 1874, having been in the same department as Instructor during the previous year. His gentle manners, fidelity, good sense, and refinement of taste had greatly commended him to his pupils, his colleagues, and the governing boards. The department was not in good condition when he entered it; but during his too short service the interest in elocution among the students rapidly increased, and the good effects of his labors were conspicuous on all the occasions when students speak in public. Mr. Baxter was the first professor of elocution in the University; and his modest, quiet, but fruitful labors did much to secure permanently for the department the respect and support which it greatly needed.

RESIGNATIONS.

Henry P. Starbuck, Proctor, October 8, 1877.
Herbert L. Harding, Proctor, October 8, 1877.
John Murdock, Proctor, November 12, 1877.
Charles W. Wetmore, Proctor, March 11, 1878.
Silas M. Macvane, Instructor in Political Economy, to take effect September 1, 1878, April 8, 1878.
Oliver Stearns, Parkman Professor of Theology and Dean of the Divinity Faculty, to take effect August 31, 1878, April 29, 1878.
James G. Croswell, Tutor in Greek, to take effect September 1, 1878, June 24, 1878.
William H. Rollins, Instructor in Dental Pathology, July 8, 1878.

Professor Stearns notified the Corporation, in April, 1878, of his intention to withdraw from his professorship in the Divinity School at the close of the academic year, because he began to feel himself liable to the infirmities of advancing age. During his fifteen years (1863–78) of service, Dr. Stearns not only gave all the instruction in the two important departments of theology and ethics, but also exercised a careful supervision over the buildings and equipment of the School, and took the kindliest interest in the personal welfare and needs of every student. The loss which the School suffers through the retirement of Dr. Stearns could not at present be made good, even if it were possible to find a suitable successor; for the income of the School has recently been so much impaired, that the Parkman professorship must for the present remain vacant.

APPOINTMENTS.

[UNLIMITED, OR FOR TERMS LONGER THAN ONE YEAR.]

Alexander Agassiz, to be a Fellow of the Corporation, June 13, 1878.

Charles C. Everett, to be Dean of the Divinity Faculty, June 24, 1878.

George L. Goodale, to be Professor of Botany, June 24, 1878.

Bennett H. Nash, to be Assistant Professor of Italian and Spanish for five years from September 1, 1876, November 26, 1877.

James B. Greenough, to be Assistant Professor of Latin for five years from September 1, 1878, June 24, 1878.

Clement L. Smith, to be Assistant Professor of Latin for five years from September 1, 1878, June 24, 1878.

George H. Palmer, to be Assistant Professor of Philosophy for five years from September 1, 1878, June 24, 1878.

James G. Croswell, to be Tutor in Greek for three years from September 1, 1877, November 26, 1877.

Edward S. Sheldon, to be Tutor in German from September 1, 1878, April 8, 1878.

Louis Dyer, to be Tutor in Greek for three years from September 1, 1878, June 24, 1878.

Robert W. Willson, to be Tutor in Physics for three years from September 1, 1878, June 24, 1878.

Allen W. Gould, to be Tutor in Latin for three years from September 1, 1878, June 24, 1878.

Francis W. Dean, to be Tutor in Surveying and Drawing for three years from September 1, 1878, June 24, 1878.

Frederick Lutz, to be Tutor in German for three years from September 1, 1878, July 8, 1878.

Walter Faxon, to be Instructor in Zoölogy, April 29, 1878.

George F. Arnold, to be Assistant in the Library from February 1, 1878, January 28, 1878.

Albert S. Thayer, to be Proctor, October 8, 1877.
Edward P. Usher, to be Proctor, October 8, 1877.
Robert S. Avann, to be Proctor, October 8, 1877.
Willis A. Kingsbury, to be Proctor, October 8, 1877.
Charles J. Gardner, to be Proctor, November 26, 1877.
Gerrit S. Sykes, to be Proctor, November 26, 1877.
Eugene M. Wambaugh, to be Proctor, November 26, 1877.
William I. Nichols, to be Proctor, February 11, 1878.
Charles H. Wiswell, to be Proctor, March 25, 1878.
Hollis R. Bailey, to be Proctor, September 23, 1878.

[FOR ONE YEAR OR LESS.]

For 1877–78.

Edward S. Sheldon, to be Instructor in Modern Languages, October 8, 1877.

Henry N. Wheeler, to be Instructor in Mathematics, October 8, 1877.

George Riddle, to be Instructor in Elocution during the temporary absence of Professor Baxter, January 28, 1878.

Thomas M. Rotch, to be Clinical Instructor on Diseases of Children for the current academic year, March 25, 1878.

Frederick H. Lombard, to be Assistant in Physiology, October 8, 1877.
Cyrus T. Peckham, to be Assistant in Chemistry, October 8, 1877.
Edward P. Elliot, to be Assistant in Chemistry, October 8, 1877.
William H. Melville, to be Assistant in Mineralogy, October 8, 1877.
Marshman E. Wadsworth, to be Assistant in Geology, October 8, 1877.
Charles F. Mabery, to be Assistant in Chemistry, October 8, 1877.
Nathaniel D. C. Hodges, to be Assistant in Physics, October 8, 1877.
Robert W. Greenleaf, to be Assistant in Botany, October 8, 1877.
Winslow Upton, to be Assistant in the Observatory from one year from November 1, 1877, November 26, 1877.
Oscar Jackson, to be Assistant in the Laboratory of Organic Chemistry, December 10, 1877.

For 1878–79.

Silas M. Macvane, to be Instructor in History, April 8, 1878.
James L. Laughlin, to be Instructor in Political Economy, April 8, 1878.
Henry C. Lodge, to be Instructor in History, April 8, 1878.
Edward L. Mark, to be Instructor in Zoölogy, April 8, 1878.
Harry B. Hodges, to be Instructor in German and Chemistry, April 8, 1878.
George A. C. Bendelari, to be Instructor in Modern Languages, May 13, 1878.
Ephraim Emerton, to be Instructor in History, June 24, 1878.
Benjamin M. Watson, to be Instructor in Horticulture, June 24, 1878.
Thomas S. Perry, to be Instructor in English, July 8, 1878.
Charles P. Ware, to be Instructor in English, July 8, 1878.
Frank W. Draper, to be Lecturer on Forensic Medicine, July 8, 1878.
Elbridge G. Cutler, to be Assistant in Pathological Anatomy, July 8, 1878.
Charles F. Folsom, to be Lecturer on Hygiene, July 8, 1878.
George F. H. Markoe, to be Instructor in Materia Medica, July 8, 1878.
George M. Garland, to be Assistant in Physiology, July 8, 1878.
Henry P. Quincy, to be Assistant in Histology, July 8, 1878.
Francis B. Greenough, to be Clinical Instructor in Syphilis, July 8, 1878.
Samuel G. Webber, to be Clinical Instructor in Diseases of the Nervous System, July 8, 1878.
Edward Wigglesworth, to be Clinical Instructor in Syphilis, July 8, 1878.
Clarence J. Blake, to be Clinical Instructor in Otology, July 8, 1878.
John O. Green, to be Clinical Instructor in Otology, July 8, 1878.
Charles P. Putnam, to be Clinical Instructor in Diseases of Children, July 8, 1878.
James J. Putnam, to be Clinical Instructor in Diseases of the Nervous System, July 8, 1878.

Joseph P. Oliver, to be Clinical Instructor in Diseases of Children, July 8, 1878.
Edward N. Whittier, to be Assistant in Clinical Medicine, July 8, 1878.
Joseph H. Allen, to be Lecturer on Ecclesiastical History, September 9, 1878.
Arthur T. Cabot, to be Instructor in Oral Pathology and Surgery, September 23, 1878.
Howard M. Ticknor, to be Instructor in Elocution, September 23, 1878.
George Riddle, to be Instructor in Elocution, September 23, 1878.
Winslow Upton, to be Assistant in the Observatory for one year from November 1, 1878, September 23, 1878.
Frank Waldo, to be Assistant in the Observatory, September 23, 1878.
William M. Davis, to be Instructor in Geology, September 23, 1878.

William Gray, Henry J. Bigelow, Thomas G. Appleton, to be Trustees of the Museum of Fine Arts for one year from January 1, 1878, December 31, 1877.

George H. Stoddard, to be temporarily Auditor of the Dining Hall Association, September 9, 1878.

The first scholarship in Harvard College was established in 1852. It was fitly named the Abbot Scholarship, in honor of Dr. Abbot of Phillips Exeter Academy, an institution in which a successful system of aid for promising young men had been for many years in operation. The creation of this first scholarship was, indeed, due to persons who had themselves experienced the benefits of the "foundation" at Exeter. There are now one hundred and twelve scholarships, of which one hundred and seven are available. If the future may be judged by the recent past, the number is likely to increase; for thirty-two new scholarships have been endowed within the past ten years. Similar trusts have been created in several other colleges. The money paid on scholarships in Harvard College from 1852 to 1878 inclusive, amounts to $275,634.20, and the present annual payments to about $25,000. The wise administration of scholarship trusts is, therefore, a very important matter both to colleges and to the community; and Harvard College will render no inconsiderable service to liberal education if it can exhibit the actual working of its scholarships through a long period of years, so as to show what the safest methods of appointment are, and to demonstrate from its own experience, beyond reasonable doubt, the public utility of a well-guarded scholarship system. The subsequent lives and services of the holders of college scholarships must supply the materials for this demonstration. As the first holders of scholarships in this College are under fifty years of age, while the majority of the persons who have held scholarships are still under thirty-three years of age, it is obvious that no complete exhibition of the fruits of the system can yet be made. The oldest incumbents have many years of good work before them; the younger have not reached their prime. It has seemed desirable, however, to collect and preserve the facts concerning the first twenty years of scholarship administration, for the benefit of the next generation, which, by continuing the inquiry, will in time be in possession of evidence whereon to base sound conclusions upon the whole subject.

The College records show that in the classes from 1853 to 1872, inclusive, two hundred and eighty (280) persons received scholarships, of whom seven (7) never graduated. It appeared on investigation that of the two hundred and seventy-three graduates, twenty-eight (28) were dead, as follows: —

Killed, or died of wounds or disease, in the service of the United States, 1861–1866	7
Died of disease within three years of graduation	7
,, ,, ,, five ,, ,, ...	2
,, ,, ,, ten ,, ,, ...	11
,, ,, ,, eleven ,, ,, ...	1
Total deaths	28

It further appeared that eight (8) of the incumbents were utterly lost sight of, nothing having been heard of them for years, either by the College authorities or their classmates. There remained two hundred and thirty-seven (237) persons concerning whose lives, after leaving college, information was to be obtained. To each of these persons a circular letter (Appendix I.) was sent on Oct. 21, 1878, asking information upon the following points: 1. Training received after leaving college; 2. Employments; 3. Services rendered as teachers, writers, ministers, lawyers, physicians, or otherwise; 4. Means of influence; 5. Health; 6. Influence of scholarship upon subsequent career. Answers have been already received from two hundred and seventeen (217) of the persons addressed; ten (10) were too far off to be heard from within two months, or were temporarily inaccessible; and ten (10), whose addresses are supposed to be accurately known, have not replied to twice-repeated inquiries. There has been, however, no difficulty in procuring from trustworthy sources the main facts of the lives of the twenty (20) persons from whom no direct information has been received. The occupations of these two hundred and thirty-seven (237) persons may be roughly classified as follows: —

Teachers for life (professors, school-masters, and school superintendents)	63
Ministers (including missionaries)	32
Lawyers	87
Physicians	19
Business (civil servants, traders, manufacturers, corporation agents, book-keepers)	26
Librarians	3
Journalists	6
Civil engineer	1
Total	237

In addition to the sixty-three (63) teachers for life, seventy-two (72) persons, who ultimately entered other professions, taught for terms varying from one year to ten years, many of them in places of considerable responsibility. The answers to the inquiry about health are incomplete: one hundred and forty-two (142) report good health; twenty-three (23) report bad or precarious health; and there is no report on the subject from seventy-two (72). From the callings of this body of men, it might be reasonably inferred that their means of influence were considerable; and the letters themselves give a very strong impression of the general respectability, usefulness, and worth of the writers as a body. The letters almost unanimously express a sense of obligation for a great benefit enjoyed, a belief that scholarships at Harvard were good for the writers, and are useful to the College and the public, and a purpose to repay, or transmit to others, the benefaction received. From these sentiments of gratitude and approval there are but five who dissent, of whom the first seems to doubt whether liberal education itself be an advantage, since it opens the eyes to the corruption of society and the nation; two are dissatisfied with their own subsequent careers; one holds that the scholarship system engenders a slavish studying for rank; while the fifth found the acceptance of aid in college a humiliation, the memory of which is still bitter. To these five dissentients should probably be added some, at least, of the ten persons who have made no answer to the repeated inquiries addressed to them. It can hardly be that these persons rest under any vivid sense of obligation for the scholarships they received.

Every effort will be made to fill the gaps in this interesting series of letters; and the whole correspondence will be placed among the records of the College, to be continued and extended from time to time, as experience in the management of scholarships increases, and as the fruits of the system ripen and abound. The knowledge that this interest attaches to their after lives cannot but quicken in the minds of the incumbents themselves the just sense of obligation and responsibility. But while it is too soon to exhibit the full effects upon the community of the scholarship system as administered at Harvard College, it is possible to point out certain benefits which accrue to individuals, the College, and the public from these endowments, — benefits which are neither hypothetical nor future, but which have been already realized in actual lives. The deliberate, written evidence of persons who have held scholarships, and have experienced the benefits they describe, will supply an effective exposition of this part of the subject.

It should be premised that scholarships at Harvard College have always been awarded for scholarly attainments and good conduct proved at the College. Certificates do not procure them; nominations (except in a very small number of cases, and those chiefly relating to class scholarships) are unknown; the recipient of a scholarship commits himself to no particular study, opinion, or profession; and the enjoyment of a scholarship for one year gives no title to a second appointment. To the statement that no candidate for a scholarship commits himself to a profession, there is one partial exception. For the fifteen Matthews scholarships (of $300 a year each), persons who intend to enter the ministry of the Protestant Episcopal Church are "to be preferred," provided that they are suitable candidates in other respects. Thus far (the scholarships only date from 1871), the only effect of this preference to which objection could be taken has been, that a few worthy persons have received scholarships of larger annual value than their standing as scholars would have entitled them to; but it is conceivable that such a preference, even with the best safeguards, should sometimes tempt a young man to sully his sincerity. It should be added, that at Harvard the recipient of a scholarship pays the tuition fee, his room-rent, and his board-bill, like every one else. There is no remission or reduction of these charges.

The earliest benefit which scholarships confer is the inspiration of a hope. The hope of getting a scholarship carries many young men to college who, without that hope, would never — to their loss and to that of the College and the community — have tried to get a liberal education. On this point let a respected teacher testify — a teacher who has had a share in training more than sixteen hundred pupils, of whom nearly one-half entered college, and about three-tenths entered Harvard College.

"In regard to the effect upon my course in life of my getting a scholarship in college, I will say that the hope of getting such aid induced me to go to college, and without such hope I should not have made the attempt.

"My father was a small farmer in the upper part of ——, and his income, above the support of his family and the payment of taxes, did not amount to fifty dollars a year. There was scarcely a farm in my native town that would have sold for money enough to pay the necessary expenses of a student for four years at Harvard College. The necessary expenses of a college course seemed to me, a boy, an enormous sum, and if I had had the courage to incur so great a debt, I cannot now call to mind any one who could or would have loaned me the money."

To the same effect writes a young lawyer in the city of New York, whose ready pen was an unfailing resource during the first years of his professional life. There can be no doubt that many young men are influenced by this stimulating hope, which prompts to beneficial exertion many who never reach the goal of their desires.

"In 1861, living in a Western city, I first had a strong desire to go to Harvard College. This feeling scarcely amounted to a hope; for I was without any money whatever, my relatives were not able to send me to college, and I knew of no way of getting means for that purpose. I wrote to Cambridge for a Catalogue, chiefly with the view of the pleasure its reading would give me, and with little or no expectation that it would be the means of my going to college. When I read in it the information about the scholarships, my desire to go to Harvard at once changed to hope. I then wrote to a friend, a student in the college, for the purpose of getting more particulars about the scholarships, as well as about the other pecuniary aid spoken of in the Catalogue. Finding that a scholarship was probably within my reach, I saw my way tolerably clear to college, determined to go, and at once began to get ready. I received a scholarship in each of the four years; and these were my main support while there. Whether, having reached Cambridge, I should have got through college without a scholarship is not here to the point. If I had

> not learned of the scholarships, I should not have started for Harvard, nor, as I believe, for any other college. . . . I believe that my life would have been wholly different if I had not received a college education, and that I should not have obtained one without the Harvard scholarships."

The existence of scholarships in the College is a great comfort to parents who were themselves well educated, but whose means are scanty; and when the sons of such parents actually win scholarships, the income therefrom relieves what would otherwise be the distressing burden of their college expenses. Upon this point a minister, who occupies a high professional position, and earns a salary much larger than the average, writes as follows: —

> "The importance of the scholarships is rather to be judged (it appears to me) by reference to their assistance to parents. Mine was of great help to my father, a clergyman living on a very moderate salary. And they have already a prospective importance to myself. I have two sons whom, some years hence, I shall earnestly desire to send to college, and I should with great distress send them anywhere but to that where both my father and myself and all my best friends were graduated. I believe, in a word (judging from my own case), that they seriously encourage men of moderate means to send their sons to Harvard; that they tend to secure to the College some of its best material in the descendants of its own alumni; and thus, through the effect of transmitted qualities and traditional associations, do much to increase its influence and strengthen its position in the community. With no feeling stronger or warmer in my heart than my gratitude and love for the College, and my desire for its honor and usefulness, . . . I remain," . . .

The incumbents of scholarships, if otherwise they would be penniless or much straitened, are relieved of anxieties, distresses, humiliations, or hardships, which, at the best, are serious impediments to study, and which have often been so extreme as to endanger bodily or mental health. They relieve young men from wearing anxiety about the necessaries of life, and enable them to live comfortably enough to study. The nature of these impediments and dangers is well set forth in the two following letters. The writer of the first letter has been for twelve years a successful teacher in an admirable school; the writer of the second is well established as a lawyer in a large city, and is in receipt of a good professional income.

"The struggles with poverty that scholarships are, or ought to be, intended to relieve, and the lifting of such burdens, probably go unrecorded. The strain upon one's pride at being obliged to wear seedy clothes; the going without many of the conveniences, and most or all of the luxuries, of life; the living on cheap, and, likely enough, insufficient food; the humiliation of being snubbed by unwilling and reluctant money-lenders; in short, the continual mental anxiety that straitness of means causes, and that seriously interferes with the repose and serenity of mind so necessary to the highest success in literary pursuits — all these annoyances may be removed by the bestowal of a scholarship; and yet the records, as I suppose, will show nothing more than the student's deportment and proficiency in his studies.

"I entered college with about $100 in my pocket, and the expectation of about $100 more annually from the State scholarship, but with no certainty of any thing more, except what I might obtain by borrowing. My experience in obtaining loans on easy terms, or on any terms, was neither agreeable nor encouraging; and I assure you that every dollar I received from college funds was received with the profoundest gratitude, and made to do all that a dollar could be made to do in furtherance of my plan to get the best possible education with the least possible accumulation of debt. The President's scholarship, to which I was appointed at the end of my Junior year, lifted a weight that would otherwise have borne heavily upon me all through the Senior year, and long after. I have never ceased to regard it as an unqualified blessing."

"My college course was in some respects peculiar. I had a good fit at ——, but I entered under some disadvantages. I was a country boy, almost entirely without means. I had no idea what the cost of living was to be, and I had no one to set me up and give me advice. . . . I came with less money than proved necessary to establish myself and live two months, and there was no more to be had. My room-mate, who entered the Sophomore Class without a condition, became disheartened at the outset, and returned home. Every consideration of prudence should have led me to take the same course. In a certain sense, therefore, I attribute my college course to an ignorance and consequent recklessness in money matters, which, in other respects, constantly worked to my disadvantage. I took in a stranger as room-mate who had not New England notions of thrift and economy. I left at Thanksgiving to keep school, and came back some time after the second term had begun. The money was soon gone, and I had fallen behind by my absence, and, I am ashamed to say, I became thoroughly discouraged. . . . I did not expect to get a scholarship, and I set about reducing my living to the lowest point, with the plan of staying in college as long as possible. I had no definite idea that I should graduate. Two or three other boys took the same course. A., who worked hard, had a fever at the end of the year. B. died. A. has died within three years. For breakfast and supper we had bread, and sometimes milk. We "dined" at a cellar in Cambridgeport. My outlay for food for a week was often less than a dollar and seventy cents. This was in 186–, when war-prices . . . prevailed. I was healthy and vigorous when I entered college, and this style of living told chiefly on my energy and spirits. But somehow it exhausted my energy. When I entered college from ——, I had a stock of energy, of vital force, which made exertion a pleasure, a source of exhilaration. During my college course this sank to the lowest point. I no longer felt any spring, but simply dragged along. Moreover, in spite of the kindness of the President, I always felt humiliated when I went for money. This was perhaps not logical, but it was the feeling I had. I think I was generally moody and ill-natured, and hence made few friends. During my Senior year I received private aid, and in that year got the —— Scholarship. After my graduation I kept a private school a year, and then entered the Law School. During my two years there I had private pupils. I date my recovery from the Law School."

In the next place, scholarships diminish the amount of debt which young men without means are too often compelled to incur during a long course of education. The evil of borrowing money to meet the cost, or part of the cost, of education, is strongly stated in the following extract from the letter of a former holder of a scholarship, now a successful lawyer: —

"A young man who endeavors to go through Harvard on insufficient means usually takes one of the following courses: He either (1) does outside work — as teaching — much more than is for his good; or (2) practises economy much more than is for his good; or (3) borrows money; or (4) receives it as a gift; or (5) has a scholarship. The receiving of a scholarship seems to me less objectionable than any other of the above ways of securing the desired end, — and the borrowing of money, by all odds, the worst. If statistics were obtainable respecting those who have run in debt for their college education, showing how long after graduation such debts are paid, and how many times they are never paid, I have an idea such statistics would be both startling and instructive. Such a young man naturally pays a high rate of interest, and as he has no other security to offer, commonly gets his life insured at considerable expense; and as he ordinarily keeps on borrowing until he is started in his profession, he gets loose and mistaken ideas of business and the value of money fixed in his character, and he finds paying up a very different thing from what he expected."

In the great majority of cases, college debts incurred by persons of capacity and character are paid by teaching immediately after graduation. They should always be so paid, and should never be carried into the opening years of professional life. On this condition, it does not seem unjustifiable, provided the borrower be of sound health and of proved vigor of mind and will, to borrow a portion of the cost of the four years at college. A careful man, who has the capacity to teach, can save from $1,200 to $1,500 in two years of teaching immediately after graduation. The correspondence now under consideration presents many cases in which debts were paid and money laid up for the period of professional study by teaching for a term of years. Among the teachers for life are many persons who used their first earnings to discharge private indebtedness. The justification of borrowing lies in the fact that, by a judicious expenditure at the college age, the young man's capacity for earning money is permanently and greatly increased. Of course, the holders of scholarships are also the most trustworthy borrowers of money with which to pay college expenses, because they are intelligent and industrious persons; it should need no argument to prove that young men of little promise should not be allowed to borrow money, whether for their education or for any other purpose. If dull or feeble youth cannot be educated at the expense of their parents or friends, their education might better stop before the college is reached. To incur debts during college life, although often justifiable, is to assume serious burdens in after life. It involves the devotion of precious years to occupations which may be uncongenial and unprofitable except in a pecuniary point of view, the postponement of professional study, and perhaps of marriage. For many young men, scholarships have diminished these burdens, and lightened these sacrifices.

It is another advantage of scholarships that they save the health of some promising young men of delicate make who could not bear the hardships of extreme economy, the extra strain of earning money while they are studying in college or professional school, or the wear of constant anxiety about the means of living. Their usefulness in this way is well illustrated in the following interesting letter from a minister, whose life has been, and bids fair to be, one of unusual influence: —

"My father, who was a minister, died when I was ten years old, leaving my mother to bring up her two boys on a very limited income. It became, therefore, a serious question how we were to receive an education. It had been my mother's plan (if it were possible to send us to college) to have us enter ——, where our father had graduated; but the hope which my teacher indulged that I might obtain a scholarship at Harvard turned the scale in favor of entering there. I ought to add, that at that time there were State scholarships (since cut off), one of which had been secured for me just previous to my admission to college, and which I held for three years. I should say that the fact of this scholarship decided me towards a Massachusetts college, and that the hope of a college scholarship fixed my choice upon Harvard. The alternative would have been some small, cheaper, and sectarian college.

"I was fortunate enough to receive a Thayer scholarship, which I held through my course. I was thus enabled, with careful economy, and with the little which my mother could spare me, to graduate from college with a very slight debt. I think I required an average of about $525 a year. As I had never been very robust, I suspect that the rigid economy to which I should have been subjected in case there had been no help from scholarships, would easily have ruined my health. In fact, it was probably that cause which had shortened my father's life. In my case, however, my health was better when I left college than when I entered. . . . I shall never cease to be grateful for the generous help which secured my college course at Harvard. I trust that with me, as with many others, it has served to deepen that sense of obligation with which every true man must feel that his life and services are owed to the community. I cannot believe that this obligation is any less strong or less willing with us whose support has come from endowments, than with those whose parents have possessed their means of support."

It is the general testimony of the men who have held scholarships that the acceptance of the aid did not impair their self-respect, or exert any other unfavorable influence upon their characters and lives. A scholarship is generally regarded as an honorable prize to be won, as an incentive to exertion, and a just reward of fidelity; not as an unearned gratuity or charitable donation. For the first six years, — that is, from 1852 to 1858, — the names of the recipients of scholarships were printed in the Annual Catalogue, with the names of those who received "deturs" and prizes for speaking and writing; and the Faculty have recently (Jan. 14, 1878) returned to that practice, — for this reason, with others, that publication emphasizes the fact that a scholarship is an honor. It is an honor, to be sure, not accessible to any but persons who need pecuniary aid; but the College now holds out to the young men who are excluded from the competition for scholarships honorary distinctions in the "second-year honors," the final "honors," the Commencement parts, and the rank-lists published for each distinct course of study in the Senior year. These are distinctions obtainable and obtained alike by rich and poor. It is important from this point of view that the administration of scholarship trusts should be impersonal and almost automatic, and at the same time discriminating and just. In the methods of appointment there should be no element of solicitation, on the one hand, or of personal favor on the other; and this has always been true of appointments to scholarships at Harvard College. In the following extracts, sentiments which are common among the holders of scholarships are forcibly expressed; the first is taken from the letter of a lawyer in good practice in the city of New York, the second from the letter of a minister well settled in a New England city: —

"I never felt any the poorer in spirit for receiving the assistance thus given. The scholarship trusts were of a public character, and the aid was furnished not for favor, but for merit. I thought then, and still believe, that it was an honor to obtain a scholarship. And even after so long a time, I now regret that I did not work hard enough to win more of them than I did.

"A self-made man who is also well made is not often met with. In this country, as well as everywhere else, a youth, before he can enter upon, or at any rate complete, an extended course of classical study, — the prerequisite of a life of culture and refinement, — must receive assistance from some quarter. He is, perhaps, fortunate if parents or relatives can give it; but, if these fail him, he will still be fortunate in receiving it from the bountiful hand of an impersonal and discriminating charity."

"I have never ceased to be grateful for the aid of scholarships, and am as proud of the winning of them under the circumstances as of any thing in my life. My opinion is decided, that if properly guarded, and offered only for conduct and scholarship, they conduce to nothing but manliness, and are good. Given as badges of poverty, they are injurious alms of the worst sort. The main difference in my career is, that without the scholarships I should have gone to Antioch [College]. The rest is an unknown quantity.

"I do not consider myself in debt to the College. I should offer to pay for the silver cup won in a boat-race as soon as consider the proceeds of a scholarship borrowed money. If I were rich, however, I should consider myself in debt to those who may come after me, and should endow scholarships. As it is, I count myself under obligation to help other poor fellows to an education, and have already done so with money and work.

"There is not an officer of the University who is not dependent, more or less directly, for his support upon funds of similar character. The student cannot dine, exercise, go to church, study in his room, recite, or even sleep in his bed anywhere in the College grounds, without receiving that which he does not pay for. I do not see any objection in carrying the help one step further, and giving special aid to those who deserve it."

Scholarships should answer two objects: they should contribute, first, to the welfare of the scholars themselves, by increasing their powers, and their capacity for happiness; and, secondly, they should contribute to the welfare of the community, by enabling scholars trained on the endowments to repay to the public in services what they received in education. Now, both these ends will be likely to fail of fulfilment if there be no adequate sense of obligation on the part of the recipients of scholarships. If a scholarship was essential to the obtaining of a college education,— as many holders of scholarships have said concerning themselves in the correspondence under consideration, — the obligation is a very deep one. When a highly cultivated man, whose whole life has apparently been determined by the nature of his education, says of himself: "My life has been very materially influenced by my holding a scholarship; I should not have entered college if I had not been assured in advance of receiving one; and, without that assistance, I should not have been able to finish the course," — he describes an obligation which can only be compared with the debt every one owes to father and mother. To be insensible to such an obligation argues a character which promises but little happiness and but little usefulness. It has been said that the fact that very little of the scholarship money paid out since 1852 has been repaid, indicates a lack on the part of the recipients of any effective sense of obligation; but this argument has really but small application to scholarships, which are not regarded as loans or gratuities, but as prizes or rewards fairly earned. They are not money debts which can only be paid in money: they may be paid in services to the College, to learning, to young men in need of like help, or to education in general. They have been and are so paid. The greater part of the letters received from the men who have held Harvard scholarships contain strong expressions of gratitude; but the record of their honorable and useful lives already shows, although still short and incomplete, that scholarship endowments yield a sure and rich return in services rendered to the public. As this record grows longer, and, for the older men, can be completed, this demonstration will be more and more convincing; yet there will always be good reasons for not expecting large direct repayments of scholarship money. The recipients of scholarships are men who start in life with nothing, and, as a rule, enter the learned professions, in which large incomes are very exceptional. In direct illustration of the point under discussion, the following letter from a young country lawyer in Massachusetts is printed in full, and below it is placed an extract from the letter of an influential teacher in a New York town: —

"Your circular is received, and I hasten to reply. I may be lengthy; but, if so, you must pardon me, for I think my life as a student is a fair sample of what Harvard College can and does do for young men without means. In 186–, I was, at the age of thirteen, a pupil in the high school at A. My father was a workman in a boot manufactory, earning perhaps $3 a day. He was a man of good ability, well-informed, and, before 1856, had been in business for himself, and was worth, say $15,000; but, in '56–'57, he failed totally, and afterwards earned his living by days' labor. Mr. ——, the principal of the high school at A, induced my father to send me to —— Academy in ——. I entered the Junior Class there in 186–, and at the end of the first term obtained a scholarship, which I received during my three years' course. My father paid the balance of my expenses. In July, 186–, being persuaded that I could gain a year by so doing, I passed the examination and was admitted to the Sophomore Class in Yale College. I then returned to A. I was entirely without means; my father could do no more for me, and I had no relatives who were disposed to. I saw that it was impossible for me to go to Yale College (I am glad of it long ago). I called on Mr. ——, a townsman and old friend of my father's, and just then appointed —— at Cambridge. He suggested a way. Three persons loaned me $50 each, for which I gave my note of honor, payable from the first money I obtained after graduation. In September, I passed the examination for the Freshman Class at Harvard. During the winter, from necessity, having used the $150, I made application to teach, but was not allowed to do so, Professor A giving me $100 from a source then and now unknown to me. I obtained a scholarship of $250, and kept it. I earned money by private pupils, by reading translations to advanced-class men, and by blowing the organ in Appleton Chapel, and was the constant recipient of help from the College. At one time, Professor B gave me $100 from a lady who did not wish to be known, he said. In May, 186–, I was appointed assistant teacher of the B High School. My duties were to teach girls and boys Latin and Greek, from 8 A.M. to 1 P.M. I returned to College in June; passed my annual examinations; and had money enough, after paying all bills, to pay the $150 I borrowed upon entering College, never having received any money from any source except what the College gave me and I earned, except the borrowed $150. I remained in B three years. I reached $1,200 the first year, $1,500 the second year, and $1,700 the third year for my services. I fitted seven young men for Harvard College: one died, the other six have graduated. Their names are A, B, C, D, E, and F, all of B. While at B, I taught, in addition to my school, private pupils, among them my two younger brothers, whom I fitted for the middle year at —— [Academy]. I sent them thither, and kept them there at my own expense as long as I was able. One of them has since studied law with me, been admitted [to the bar], and is now practising in ——, bidding fair to be an ornament to the profession. While at B, I studied law with Hon. —— and Hon. —— (mostly night work), and in February was admitted at —— by Justice ——, upon examination. In April, 187–, having married in April, 187–, I removed to A, and began to practise law. I was appointed a trial justice in May, 187–. I earned a support at once, not because I received very large fees, but chiefly by living within my income, having had some experience in that way in the years past. In 187–, I was Republican candidate for the Legislature, and was defeated. In 187–, I removed to C, and have been hard at work in my profession ever since. My income has steadily increased; I have bought a place here, and probably shall call this home. I see no reason why I should not succeed. As to my influence in the community, I should prefer to have my neighbors say. I want you to understand that I was poor. For instance, while in College, being a member of the Sophomore Crew, and engaged in the June regatta, some one stole my coat, which was the only one I had. I had then no coat and no money. A friend lent me a coat; and that borrowed coat I wore a long time, until I could get money enough to buy another. I hope I shall live long enough to send my boy to Harvard and pay his expenses, and pay the University every dollar, with interest, that it has helped me to, and give it a good deal into the bargain; and then I feel that I owe the College a debt that I can never pay. Respectfully yours," . . .

"I have no doubt that the holding of a scholarship has very materially influenced my career. Without it I should not have graduated from Harvard College for several years after the date when I did graduate, and probably never. Without the prospect of gaining one, I should probably never have entered. Indeed, I may as well strike the *probably* out of the last sentence, and say that I *certainly* should never have entered Harvard. . . . More than this, I am confident that the impulse thus given has not ended with me, but has been transmitted through me to others. When I find a young man enterprising, ambitious, but hesitating about attempting a college course because of slender means, I am able to offer him from my own experience the strongest kind of encouragement, and not only that, but I afford him all the aid in my power to promote his advancement. I do not believe that I am alone or exceptional in this respect. My experience and observation lead me to believe that if the entire amount of aid and encouragement rendered to others by the two hundred and eighty-two recipients of scholarships during the twenty years ending with 1872 could be summed up, this alone would show that the sum bestowed had been wisely and economically expended."

The two following short but graphic letters are given, because they touch several of the points which have been under discussion, and present strikingly some of the quiet but beneficent results of the scholarship system: —

"I have been one year master of a grammar school, three years principal of an academy, and fourteen years principal of a high school. Nearly every college in New England has received pupils who were fitted under my supervision. I have now entered upon my fifteenth year's service as principal of the —— High School. My health has been excellent. Three weeks would more than cover the time I have been kept from my regular duties by sickness since I graduated.

"I have had a reasonable share of pecuniary prosperity. Besides discharging the debt imposed upon me by my college expenses and supporting my family, including four children, I have earned a comfortable home and a little additional property.

"In regard to the effect which the holding of a scholarship has had upon my career, I can only say that, with the exception of the income derived from the scholarship, and what I earned by teaching during the winter vacations, I was obliged to borrow every dollar which I spent during my college course. At the time the scholarship was conferred upon me, I was quite despondent. I think, however, I should have persevered to the end, if I had not received it; but it certainly served to greatly encourage me.

"Of course, I should prefer to have the above facts regarded as confidential. But I feel that I owe a debt of gratitude to the College, . . . and I therefore give full assent to publication, if it should seem to you desirable." . . .

"I think there should be no doubt of the public utility of the scholarship system as administered at Harvard College. The aid comes to a young man at a time when he needs it more than ever before, and more than he ever will afterwards, if he makes the most of himself and his education.

"After leaving college, I spent a short time at home, and then studied law at A. I was admitted to the bar in the summer of 187–. Since that time I have practised my profession in B, besides managing a large farm. I have taken much interest in the schools of my native town, and have been the superintending school committee. I have held the office of solicitor for —— county, by appointment of the Governor and Council; and I am now solicitor-elect. I have been a member of the —— House of Representatives, and was a member of our last Constitutional Convention.

"I have enjoyed good health, and cannot complain of my personal prosperity."

It only remains to consider whether any change in the method of appointment to scholarships should be made in view of the fact that so large a proportion of the holders of scholarships have died, and that a considerable proportion suffer from ill-health. The causes of these early deaths and chronic ailments are for the most part anterior to college life; for they are chiefly attributable to hereditary taints, or to habitual neglect of the plainest rules of health in childhood and early youth. The preparatory schools where boys board together in a cheap way, without the restraints of a family table or any effective supervision, have much sickness to answer for. It would undoubtedly have an excellent effect upon the health of future generations of educated men if the founders of new scholarships should require their beneficiaries to pass a medical examination, like that which a well-conducted life-insurance company requires of the persons it insures. If sound health were one of the requisitions for the enjoyment of scholarships, parents who expected to need aid in educating their boys would have their attention directed in an effective way to the wise regimen of health; while young men who had their own education to get would see that it was only prudent for them to secure a wholesome diet, plenty of fresh air, and regular exercise. A singular notion prevails, especially in the country, that it is the feeble, sickly children who should be sent to school and college, since they are apparently unfit for hard work. The fact, that in the history of literature a few cases can be pointed out in which genius was lodged in a weak or diseased body, is sometimes adduced in support of the strange proposition, that physical vigor is not necessary for professional men. But all experience contradicts these notions. To attain success and length of service in any of the learned professions, including that of teaching, a vigorous body is wellnigh essential. A busy lawyer, editor, minister, physician, or teacher has need of greater physical endurance than a farmer, trader, manufacturer, or mechanic. All professional biography teaches that, to win lasting distinction in sedentary, in-door occupations which task the brain and the nervous system, extraordinary toughness of body must accompany extraordinary mental powers. To rear and educate with all care children of delicate constitution or impaired health is the privilege of natural affection; but it may well be doubted if public endowments should ever be applied to such unpromising uses.

It should be observed, however, that when the incumbent of a scholarship subsequently dies or is disabled before he can render any services to the community in return for the benefits which he has received, only a part of his scholarship money is lost. Since every incumbent of a scholarship pays to the College the tuition-fee of $150 a year, while a scholarship, on the average, yields somewhat less than $250 a year, more than three-fifths of the average scholarship returns to the College, and is available to pay for instruction; and the instruction thus provided is given, not only to the scholar who dies or is disabled prematurely, but to many others. It is only the two-fifths of the average scholarship — that portion, namely, which goes to defray the personal expenses of the incumbent — which can be said to be absolutely lost in case of his early death or disability. Indeed, through scholarships the College undoubtedly gains some tuition-fees which it would not otherwise receive, and is thereby enabled to enlarge its instruction. This gain is not affected by the subsequent careers of holders of scholarships, whether they be long or short.

It must not be supposed that, because there are many scholarships in Harvard College, high standing as scholars is won only by those who need pecuniary aid. In 1876, of the first thirty-eight (38) Seniors on the rank-list of the Senior year, twenty (20) received scholarships; in 1877, of the first forty-two (42) Seniors, twenty-seven (27) received scholarships; in 1878, of the first sixty (60) Seniors, twenty-five (25) received scholarships, only five applications being refused. The Senior year is an expensive year, and the period from 1876 to 1878, inclusive, was a period of steadily increasing pecuniary straitness in the community at large.

Four deaths occurred in 1877–78 among the students resident in Cambridge, — three in the College and one in the Scientific School. Two died of brain disease, one of pneumonia, and one of anæmia. In no one of the cases could the fatal disease be attributed to any exposure or over-exertion incident to student life or to residence in Cambridge. The general healthiness of the University dormitories is remarkable. There has been no epidemic therein of fever, diphtheria, dysentery, or any zymotic disease for many years, and malaria (except in imported cases) is unknown. Six years ago the Corporation built an isolated hospital for cases of contagious disease: it has been used but twice, — once for a case of scarlet fever, and once for four cases of measles. The cellars of the buildings are perfectly drained; vigilant care is taken of all sinks and water-closets, and no garbage of any sort is allowed to accumulate in or about the buildings; no cooking, eating, or dish-washing is done in the buildings; and every room is warmed by a fire, generally an open fire. If immunity from disease be evidence of good sanitary arrangements, the Corporation had reason to be content with the condition of their buildings. Nevertheless, they last summer consulted Mr. Frederic Tudor, a sanitary engineer of experience, concerning the construction of the sinks and water-closets in the dormitories, and immediately adopted some suggestions which he made for the better ventilation of the closets, not as a matter involving health, but as a matter of comfort.

It might be supposed that Harvard, being an old college, with a considerable body of alumni, would be largely recruited from the children of her graduates; but this is by no means the case. By actual count, made in June, 1878, out of seven hundred and ninety-five undergraduates then upon the rolls of the College, only ninety-nine, or one-eighth, were sons of graduates of Harvard. The explanations of this somewhat surprising condition of things are readily discovered upon consideration. Some graduates die unmarried; others, though married, die childless; others, again, have more female than male children; while at any one time a majority of the graduates are too young or too old to have children of the College age. Moreover, twenty-five years ago, the College classes were one-third the present size. This College, therefore, like all American colleges, depends for its growth on the continual supply of entirely fresh material, not drawn to it by associations or inherited preferences, but attracted by its prestige, its accumulated resources, and the privileges it offers.

The subjoined report of the Dean of the College exhibits fully the interesting results of the first year's trial of the new method of examination for admission to the College. As there is no doubt that the new method is, in all respects, better than the old, the old method will not be maintained after 1880. The number of candidates at the preliminary examination (a year before entrance) was slightly smaller this year than it was in 1877 or in 1876. This diminution may have been caused by the dropping, in 1878, of the

September preliminary examination, or by the new requisition of the teacher's certificate that the candidate is prepared in the subjects he presents; or it may be that the hardness of the times is diminishing the number of boys who are preparing for the College.

The Dean's report enumerates the changes which the Faculty made during 1877–78 in the schedule of elective studies for 1878–79. The most important result of the action of the Faculty is, that much more instruction specifically designed for graduates was announced last spring for the year 1878–79, and much more such instruction is statedly given during the current year, than ever before. The Corporation, while unable at present to undertake new expenditures for instruction, are disposed to second the Faculty, so far as is in their power, in providing advanced instruction for graduates. In order to promote the effective organization of the department for the instruction in arts of Bachelors, the Corporation (Oct. 8, 1877) simplified the method of computing fees for graduate instruction, and (Jan. 14, 1878) voted no longer to offer, in the Catalogue and other announcements, remission of fees for instruction to meritorious graduate students who need aid. This department, like all the others, should have a stable income of its own from tuition-fees.

The Dean again discusses with great fulness the subject of voluntary attendance upon lectures and recitations. The principal facts given in this report were laid before the Faculty in a less perfect form in June last, and, after thorough discussion, the Faculty decided to extend to the Junior Class, in 1878–79, the system which was applied to the Senior Class in 1877–78. From this action it may reasonably be inferred that the former methods of enforcing attendance at recitations and lectures will, before long, be disused, like the uniform, prescribed curriculum of which they were an appropriate accompaniment.

In July, 1878, thirteen years after the inception of the undertaking, Memorial Hall was finally transferred to the President and Fellows by the Committee of Fifty. The stipulations of the Committee, on placing this noble building in the keeping of the Corporation, the assent of the Board thereto, and the recorded thanks of the Corporation to the subscribers, the Committee of Fifty, and the various officers and agents of that Committee, will be found in the Appendix (II.). Before dissolving, the Committee caused to be printed in a permanent shape the very interesting final reports of its Building Committee (Henry B. Rogers, Esq., Chairman) and of its Treasurer (Henry Lee, Esq.); and they charged three of their number to cause to be prepared and printed, in a suitable commemorative form, a complete list of the graduates and students of the University who served in the army and navy of the United States during the Civil War. The preparation of this new list has been placed in the willing hands of Dr. Francis H. Brown.

The Dining Hall was carried on very successfully during 1877–78, the average attendance (550) being larger than ever before; and the average weekly price of board ($4.03) being lower than in any previous year. The Corporation (March 11, 1878) reduced the rate of interest on the debt of the Dining-Hall Association to six per cent; but they notified the Directors that, from the beginning of the year 1878–79, the annual charge for the reduction of the debt would be $1,500, instead of $1,000. The debt of the Association was, on the 31st of August last, $41,900.91,— a serious burden, which it will require many years to remove. Thorough repairs upon the kitchens and apparatus are annually paid for by the Association, the stock of table furniture is constantly kept good, and the property of the Association is insured against fire. During the past summer, there were added to the equipment a small steam-engine, a washing-machine, a centrifugal dryer, a mangle, a meatchopper, and an ice-cream freezer, — the last five machines being driven, when in use, by the engine. This steam machinery saves in wages the interest on its cost, and facilitates greatly the daily work. Its cost ($2,136.14) was met by reserves from the income of 1876–77 and 1877–78. The fall in the prices of food and in wages since the spring of 1874 has been considerable; so that the price of board at the Dining Hall has fallen, in spite of the fact that the standard of living has been steadily raised through the action of the Directors of the Association.

About two-fifths of the students in Cambridge still board at private houses, and of this number a considerable proportion pay the high price of eight dollars a week. This price finds no justification in the present cost of provisions, but is probably to be explained by the demands made upon the boarding-house keepers by young men who have been accustomed at home to luxurious living. In 1858, the common price of board at the best tables in Cambridge was four dollars a week; at tables of the same sort it is now eight dollars. In order to demonstrate that no justification of such a difference is to be found in the cost of provisions, a table of the comparative prices of provisions at good retail shops in Cambridge in the years 1858, 1859, 1860, and 1878 has been carefully prepared, and is given in the Appendix (III.). The dealers, through whose courtesy this table has been made, have been in business in Cambridge during the past twenty years and more, and the prices taken from their books have been verified by comparing them with the household bills of several private families, who have lived in Cambridge during the whole period covered. The general result is that the retail prices of 1878 are about the same as those of 1858–60, except that the best cuts of beef (and those only), eggs, butter, coffee, cheese, molasses, vinegar, and salt codfish cost somewhat more now than then. It should be observed that the prices compared are the retail prices to families who buy articles of the best quality in small quantities from day to day. The wages of women-servants are still much higher than they were twenty years ago, — probably nearly twice as high, — although they have recently fallen somewhat. It is clear, that either the persons who take students to board at eight dollars a week are making a much greater profit than it was possible to make twenty years ago, or the students who pay this price demand and obtain more costly food than they did then. The latter alternative is undoubtedly the fact. Students, like their parents and the community at large, have got into the habit of living less plainly than they used to. As plain living is, in every respect, desirable for students, the attention of parents who have sons in the University is hereby invited to this matter. It is not directly within the control of the University.

The "Scheme for carrying on the Dining Hall," which was adopted by the Corporation on March 13, 1876, was altered, by vote of the Corporation (June 10, 1878), in respect to the appointment of the Auditor, after due notice to the officers of the Association of the intention to make such alteration. The Auditor was formerly appointed by the officers of the Association; he is now appointed, like the Steward, by the Corporation, subject to dismissal on reasonable notice by the Corporation, either of their own motion, or at the request of two-thirds of the officers of the Association. The great importance of always having a trustworthy and skilful accountant in that position was the motive of this change.

The condition of the Divinity School has been a source of grave anxiety for three years past, on account of the large reduction in the income of the School, and the utter inadequacy of its endowment. The School has, of course, felt the reduction of income from the general investments of the University; but it has especially suffered from the great falling off in the income of the Bussey Trust, to one-fourth the net income of which the School is entitled. In 1873–74 the School received from the Bussey Trust $8,837.49; in 1874–75, $8,748.56; and in 1875–76, $8,577.96: but in 1876–77 its share was only $4,451.49; and in 1877–78, $4,412.76. As the Bussey Trust is all invested, in accordance with the terms of the bequest, in real estate in Boston devoted to business uses, there is no hope that the income of the Trust will improve within any reasonable number of years. (Compare Treasurer's Statement, pp. 6 and 7.) The income of the School available for its maintenance, excluding the income of scholarship and beneficiary funds, may be stated as follows (see Treasurer's Statement, pp. 35 and 36): —

Income of funds applicable to salaries	$7,500
Term-bills for instruction, and room-rents	2,500
One-fourth net income of Bussey Trust (say) . . .	4,000
	$14,000
Add the available income of the Winn Fund for a Professorship of Ecclesiastical History	2,000
	$16,000

The general expenses of the School, apart from salaries of teachers, scholarships, and beneficiary payments, though reduced to the lowest terms, yet amounted in 1877–78 to $1,981.53. It would be imprudent to estimate these necessary annual expenses at less than $2,000 a year. If this sum be subtracted from the income of the School available for its maintenance, there will remain only $14,000 for salaries of teachers, — a sum which will support three professorships and a half. During 1877–78 there were four professors, two lecturers upon history, and an instructor in elocution; and accordingly the School had a deficit of $3,857.19. There are now (1878–79) employed in the School three professors, a lecturer on ecclesiastical history, and an instructor in elocution. Dr. Stearns has resigned the Parkman professorship; and, in spite of the importance of the departments in which he gave instruction, the vacancy thus created cannot be filled, because the salary cannot be provided. The Parkman professorship fund amounts to only $16,015.81.

The Divinity School never has been provided with an adequate number of professorships. As lately as 1869 it had but two, and it has never had more than four; it can no longer maintain four, without additional endowment. The following comparative statement exhibits the teaching force in other theological schools of repute. Special lecturers are not enumerated, unless supported by permanent endowments.

	Professors.	Other Teachers.
Andover Theological Seminary (Mass.)	8	1
Newton Theological Institution (Mass.)	5	1
Boston University, School of Theology (Mass.)	5	5
Episcopal Theological School (Cambridge, Mass.)	4	1
Department of Theology of Yale College (New Haven, Conn.)	5	1
Union Theological Seminary (New York City)	6	4
Theological Seminary of the Presbyterian Church (Princeton, N. J.)	6	1
Divinity School of the Protestant Episcopal Church (Philadelphia)	5	2
Berkeley Divinity School (Middletown, Conn.) . . . . seven teachers, but none called professor in the catalogue.		

The Divinity School of this University belongs to no denomination, and its constitution expressly prohibits the application of any sectarian test whatever, either to teachers or to students. A young man commits himself to no opinion and no religious organization by becoming a member of this School, or by receiving its degree; but he remains perfectly free to join, after his graduation, whatever church his educated judgment may lead him to prefer. This admirably liberal quality of the School, which every sincere believer in the fundamental principles of Protestantism must respect, deprives it of that strong moral and pecuniary support which a numerous and well-organized religious denomination gives to the school which avowedly trains men for the pulpits of the denomination. The strength of an unsectarian school of theology should lie, first, in its very liberality, which is in itself a strong attraction to many generous minds; and, secondly, in the number, learning, and moral force of its teachers. It should be distinguished among theological schools, not only by its freedom, but also by the number of its professorships, the ability and attainments of its professors, and the scholarly spirit which pervades it. To place the Harvard Divinity School upon an equality with other theological seminaries in the United States, it should have, at least, five professorships and an instructorship in elocution; and even then the School would rely largely, as it wisely may, upon the abundant instruction which the College proper offers in languages, metaphysics, literature, and history. The subjects of these five professorships should be: 1. Theology and Ethics; 2. Hebrew, and Old Testament Literature and Criticism; 3. New Testament Literature and Interpretation; 4. Ecclesiastical History; 5. Homiletics, Liturgics, and Pastoral Duties. Each of these subjects is of great extent, and a thorough student would deem that but an inadequate organization which threw the whole burden of each upon a single professor. Moreover, many subjects of less practical moment would remain to be treated by special lecturers or non-resident instructors. But if these five full professorships were provided for, the School would no longer compare unfavorably, as regards the number of its teachers and the variety and volume of its instruction, with other institutions of theological learning. Fully to endow these professorships, it will be necessary to provide an annual income applicable to salaries of $21,000; namely, five salaries of $4,000 each, and one of $1,000. As has been stated above, the present income of the School applicable to salaries cannot be estimated, at more than $14,000. An additional income of

$7,000, from endowments, will therefore be required; and this annual sum represents a capital of $127,000, on the assumption that the investments of the Corporation will continue to earn what they now earn, namely, about five and a half per cent a year. When this addition has been made to the present endowment of the School, it will still be much less endowed with money and buildings than several of the Schools above mentioned. Thus, the Union Seminary has six fully endowed professorships, and three endowed lectureships; while the Princeton Seminary has productive funds to the amount of $800,000. At present, the total endowment of the Harvard School in invested funds does not exceed $250,000. It possesses, also, a single, plain brick building of moderate size. The contrast between its material equipment and that of most of the other schools above mentioned, especially those at Andover, Newton, Yale, Princeton, and the Episcopal School at Cambridge, is very striking; yet it does not ask for a better building, more books, or more beneficiary funds, but only for the means to provide more instruction for its students. It is for those who believe that theology, ethics, biblical criticism, history, and homiletics should be taught without sectarian bias, who have confidence in liberty of thought, and who hold that the various philosophical theories and religious beliefs should be studied before, and not after, any of them are embraced, to say whether a School which for sixty years has represented and maintained these principles shall be adequately supported. The fact that most members of the clerical profession are committed to a particular creed, or form of church organization in early youth, or even in boyhood, long before they have attained knowledge and maturity enough to make an intelligent choice of creed or church, diminishes to an incalculable degree the influence of the profession in the modern world; for the modern world respects only the scientific method, which admits of no settled convictions except those which rest upon thorough previous investigation. By the side of the numerous theological schools which are avowedly devoted to the interests of the several denominations, and which are recruited in large part by the offer of the bounties of Education Societies to boys in academies and young men in colleges, let at least one University school of theology be suitably supported, where young men may study theology and the kindred subjects with the same freedom of spirit with which they study law in a Law School, or medicine in a Medical School, and with as little intention or opportunity of committing themselves prematurely to any particular set of opinions or practices.

The year 1877–78 was a year of transition in the Law School, as is also the current year, — a year prosperous financially, but unsatisfactory in regard to the results of the examinations for the degree. Of the eighty-one (81) students who were entitled to become candidates for a degree in June last, only sixty-six (66) presented themselves for examination, and of these only forty-seven (47) passed. The class was the last which entered the School before the establishment of the admission examination, and also the last class entitled to take the degree upon a two years' course of study. The admission examination, and the requisition of a three years' course of study, both tend to reduce temporarily the number of students in the School; but these measures, even in the first years of their application, are producing those elevating effects upon the School which the Faculty has always expected them to produce.

The Dean's Report mentions a very successful enlargement of the library-room, which was made during the Christmas recess of 1877–78; this improvement, though it cost less than $900, added greatly to the comfort of the students. As the School is not likely to grow much for a few years to come, on account of the two restrictive measures just alluded to, this inexpensive addition to the library-room will probably make it possible to postpone for a time the erection of a new building for the School.

The institution of an honor course for the degree of Bachelor of Laws *cum laude*, as set forth in the Dean's Report, was the excellent result of long discussions in the Faculty during the year.

On September 28, 1877, the Court of Appeals of the State of New York adopted new rules for the admission of attorneys and counsellors, which were intended to raise the standard of admission, and, therefore, of legal education. They provided that no person should be admitted to examination until he had served a clerkship of three years, but made an allowance of one year to Bachelors of Arts, and an allowance not exceeding two years for time spent in any New York law school, with the reservation that every candidate should serve, at least, one year's clerkship. No allowance whatever was made for time spent in any law school outside of the State of New York. As some of the most promising graduates of the Harvard Law School have for years gone to New York to practise, these rules, in spite of their excellent purpose, seemed likely to injure the School, by preventing it from training a few young men each year for the bar of the chief commercial city of the Union; but, on March 19, 1878, the Court made an addition to their rules, which not only satisfies every legitimate desire of this School, but sets an admirable example to the courts and legislatures of other States. That addition is as follows: "And any person who holds a degree in law from any law school out of this State, which maintains a course of instruction covering, at least, two academic years of not less then eight months each, and gives its degrees only after public examination, shall be allowed the time spent in such law school, in lieu of an equal period of clerkship in the office of a practising attorney of the Supreme Court." The Court has done a great service to legal education by limiting this allowance to persons who take a degree at schools which have a reasonably long course of study, and hold public examinations for their degree. These restrictions do not, indeed, apply to the law schools in the State of New York; but, as the restrictions decidedly promote the real interests of law schools, respectable institutions outside of that State will have no desire for the exemption which the New York schools have retained, although the local schools may gain some temporary pecuniary advantage from the fact that applicants for admission to the bar can count time spent in those schools, whether they take a degree or not.

The salaries of professors in the Medical School were increased in 1877–78 by about $6,000, or by about twenty-five per cent of the former appropriation for salaries; nevertheless, the School again had a surplus of receipts over expenses, and added $3,603.61 to the accumulated savings of the three preceding years. The increase of salary was confined to professors, and was largest for the professors of anatomy, physiology, and chemistry, whose work in the School has little effect to bring them practice as physicians or surgeons.

In the Report of the Dean will be found a table — interesting to examiners and candidates — which gives the statistics of rejection at the June examinations, in all departments of the School, for four years past. It is the purpose of the Faculty to continue this publication.

The chemical laboratories having been for some years crowded to an inconvenient and unwholesome degree, the Corporation, in the summer of 1877, hired suitable rooms near the Medical College, and fitted up therein a laboratory for general chemistry and qualitative analysis. The new laboratory was occupied at the beginning of 1877–78 by the First Year's Class; and thereafter the Second Year's Class had the exclusive use of the old laboratories, for the study of medical chemistry.

On April 8, 1878, the Corporation received from Miss Marian Hovey, Trustee, a proposition to give $10,000 to the Medical School, on condition that its advantages should be offered to women on equal terms with men. (See App. IV.). This offer having been communicated by the Corporation to the Board of Overseers for their consideration and advice, the Overseers (April 10) referred it to a committee, consisting of Alexander Agassiz, Esq., President Eliot, Morrill Wyman, M.D., J. Elliot Cabot, Esq., and LeBaron Russell, M.D. On September 9, 1878, Mr. Agassiz, having ceased to be a member of the Board of Overseers, and become a Fellow of the Corporation, was appointed by the Corporation, at the request of the Overseers, a committee to serve jointly with the Committee of the Overseers on the question of admitting women to the Medical School. The committee has, therefore, become a joint committee of the two boards. It has not yet made a report.

The Dental School incurred the serious deficit of $2,245.24 in 1877–78, and was in debt to the general treasury (Aug. 31, 1878) to the amount of $16,564.84,— an amount largely exceeding the value of the building which it occupies, and which is practically the only security for this debt. The unremitting efforts of the Faculty to raise the standard of education in the profession, by lengthening the course of study, increasing the clinical instruction, and improving the examinations, have diminished the number of students — a result to which the hardness of the times has undoubtedly conduced. In face of the deficit and debt the professors will forego their scanty salaries, and other expenses can be somewhat reduced; but it is doubtful whether the School can be carried on entirely without endowment. The School has no endowment whatever, not even a building. It pays rent, in the form of interest on its debt, for the house it occupies; and it has no funds. No other department in the University is, or ever has been, in this condition. By following the example of many other dental schools, and making its degree easy of acquisition, the School could undoubtedly be made to succeed as a commercial venture; but it is no object to the profession or the community that another school of low grade should be maintained, since there are more than enough of that kind already; and Harvard University may properly refuse to carry on such a school. The professors and other teachers of the School have done their part faithfully, generously, and wisely; it is for the dental profession and the community to say whether or not the School shall be supported. In the mean time the instruction given in the School improves from year to year. In September last an instructor was appointed in oral pathology and surgery; so that better provision than heretofore will henceforth be made for instruction in that part of surgery which especially concerns dentists. As appears from the statistics given in the Report of the Dean, the work of the School infirmary was carried on in 1877–78 with vigor and success.

The Bussey Institution had a deficit of $3,615.73 in 1877–78. At that rate, the whole of the free accumulated income of the Institution (laid by in prosperous years for building purposes, and called the Bussey Building Fund) would be exhausted in three years and a half from September 1, 1878. (See Treasurer's Statement, p. 6.) By the middle of the current year, some relief will be obtained, for the whole income of the Arnold Arboretum Fund will then become available, on the completion of the prescribed accumulation, and certain charges, now borne by the Institution on behalf of the Arboretum, can be transferred to the Arboretum Fund. Moreover, at the end of the current year an assistant-professorship, the salary of which is derived from the funds of the Institution, expires by limitation. As it is not probable, however, that the income of the Bussey Trust has yet reached its lowest point (some old leases having not yet expired), the Corporation expect to be obliged at the end of the current year to reorganize the Institution on a lower scale of expenditure than that adopted in 1870–71, when the income of the Institution from the Bussey Trust was nearly $17,000.00. They trust that in this reorganization the amount of instruction offered by the Institution will not be diminished. In seven years, the School has gained some ground which the Corporation hope not to lose. The number of students was eight in 1877–78 against five in 1876–77, and the fees from students were $547, against $235.75, in the preceding year. The increase was mainly due to the restored department of horticulture.

The Arnold Arboretum is a department of the Bussey Institution, occupying a portion of the Bussey estate, and possessing a separate fund which came into the possession of the Corporation in March, 1872, and then amounted to about $100,000. The Corporation were prohibited from spending more than one-third of the income of the fund, until the principal should have accumulated to $150,000. (See Report for 1871–72, pp. 77, 78.) Thereafter they are required to add to the principal, each year, five per cent of the income. In the early part of 1879, the prescribed accumulation will be completed. In the mean time great progress has been made, under the energetic direction of Mr. Charles S. Sargent, in collecting and raising in nurseries at the Bussey Institution "all the trees, shrubs, and herbaceous plants, either indigenous or exotic, which can be raised in the open air at the said West Roxbury;" but the restricted income of the Arboretum, and the lack of a plan for laying out the grounds as a museum of living specimens, have compelled the Director to confine himself to the preliminary work of the green-house, hot-bed, and nursery. During the year 1877–78, Mr. Frederick Law Olmsted, the eminent landscape-gardener, made, without charge, an admirable plan for laying out the Arboretum at once as a park and a scientific museum, thus generously giving the University the benefit of his skill and large experience. As a preliminary to the preparation of this plan, it was necessary to procure an accurate contour map of the whole tract assigned to the Arboretum. The cost of this map ($2,000), was defrayed by subscription, twelve generous friends of the Arboretum contributing the money at the solicitation of the Director. (See the Director's Report annexed.) For five years past, the care of the Botanic Garden, as well as of the Arboretum, has been in the hands of Mr. Sargent; and during this period great improvements have been made in the arrangement of the Garden. The temporary association of these two kindred, though widely separated, departments under the same direction has doubtless been of advantage to each.

The Library gives abundant evidence of the inventiveness, experience, and energy of the Librarian. The method of delivery has been improved; the subject catalogue has been elucidated by labels and guide-boards; the quarterly Bulletin has been enlarged and made to serve new purposes; the system of reserving books designated by teachers as books of reference for their respective classes has been perfected; an ingenious and serviceable device called Notes and Queries has been adopted; an unusual number of new books have been ordered and received; and the removal of books from Gore Hall to the new book-room has been carried forward with as much rapidity as the force at command would permit. As, however, it has been necessary to collect the books on each subject (often from many different places in Gore Hall), assort them anew, number them, alter their shelf-marks on the catalogue, and write out new shelf-lists, the work of removal has proceeded but slowly, and will, with the force which can at present be employed upon it, require several years for its accomplishment.

The Report of the Librarian discusses the catalogue question and the pamphlet question, recommends concerted action among the different libraries belonging to the University in the purchase of books, and to some extent in cataloguing them, describes the publications of the Library, presents the statistics of accessions for nine years past, gives an estimate of the whole number of books and pamphlets belonging to the University, recommends a University bindery, gives a tabular statement of the catalogue work done during the past six years, and supplies a rough indication of the use made of the Library during the last eight months of the year 1877–78.

The Library has now an annual income of nearly $10,000 applicable to the purchase of books; and it is administered with all possible liberality as regards the use of books. The free access to such a library which every student of the University enjoys is an inestimable privilege, as rare as it is precious. The Library has also a profound effect upon the instruction given at the University, as regards both substance and method: it teaches the teachers. It is to be regretted that the whole cost of the administration and service of the Library must at present be met from the College tuition-fees. Endowment for these departments is quite as desirable as funds for the purchase of books; for it is in vain to buy books, unless they can be catalogued, and placed on accessible shelves, so as to be readily found when wanted, and quickly delivered to the reader.

The Director of the Observatory reports an active and prosperous year, and describes in a very interesting way the work of the institution. His suggestion, made last year, that a moderate increase of income would increase, out of all proportion to its amount, the scientific productiveness of the Observatory, commended itself to the committee on the Observatory, and resulted in their undertaking to raise a subscription of $5,000 a year for five years. This work, seemingly a difficult one in these times, was more than half done in 1877–78, and will shortly be completed. The Director is to be congratulated that his own enthusiasm has won such sympathy and support; and all friends and servants of the Observatory, the dead as well as the living, are to be congratulated on the prospect of its increased usefulness and fame.

The Report of the Curator of the Museum of Comparative Zoölogy makes part of the President's Report for the first time. It presents a vivid picture of the progress and increasing usefulness of the Museum; for it describes the rearrangement of the exhibition rooms, the accessions to the collections, the publications of the Museum during the period covered by the Report, the instruction given at the Museum, the gratuitous distribution of collections to schools and colleges for use in teaching natural history, and the dredging operations of the Curator on the Coast Survey steamer "Blake" in the Straits of Florida, the Yucatan channel, and the Gulf of Mexico. The Report also contains an interesting description of a laboratory built by the Curator at Newport, for summer use in studying the marine fauna. The whole construction and equipment of this laboratory were, in themselves, a scientific research of great merit. Last summer, Mr. Agassiz generously placed the unexampled facilities of this laboratory at the disposition of six teachers (three men and three women), who were advanced students of Zoölogy; and he proposes to maintain this benefaction from year to year.

In addition to its building and its collections, the Museum now possesses a permanent endowment of about $480,000; yet the annual cost of merely maintaining such an establishment is so heavy, that the Museum still depends for its development and improvement upon the generous contributions of its friends, and especially upon the disinterested devotion and munificence of its Curator.

On recommendation of the Academic Council, the Corporation (April 29, 1878) increased the number of Parker Fellowships from three to four, and reduced the annual income of each fellowship from $1,000 to $800. The Council and the Corporation think that $800 a year will enable a young man to live comfortably, though plainly, at any foreign university, and pay for the journeys to and from home, provided that he hold the fellowship at least two years. As it is not the policy of the Council to recommend for appointment to fellowships persons who are not likely to hold them for at least two years, it will seldom happen that an incumbent is forced to pay for two voyages across the Atlantic out of the income of a single year. To increase the number of these fellowships to four, seemed more desirable than to give three an income which would permit to the incumbents some not indispensable expenditures. For several years past, the Kirkland Fellowship, with an income of only $750, has maintained its incumbent at European universities. Five hundred dollars will support a student at any American university. The income of a Parker Fellowship was fixed at $1,000, in 1873, when all prices were higher than they are now.

The fellowships for Bachelors of Arts are answering a good purpose in training teachers for the University. There are seven teachers in the College who enjoyed during from one to three years the opportunities of advanced study which these endowments provide. The University has, to its great advantage, not less than thirty-two teachers, in all, who studied at foreign universities from one to five years; and it has twenty-five teachers who are not graduates either of the College or the Scientific School, but who received their early training in other institutions. Among the professors of the University are ten who were previously professors in other colleges or scientific schools. This diversity of training and experience among its teachers tends to liberalize the University; for the scholarship of other nations, and the spirit and methods of kindred institutions, are thus brought hither.

When, in the summer of 1877, the Peabody Museum was moved from Boylston Hall to its new building, the Corporation appropriated the two large and handsome rooms on the western side of the Hall to the Museum of Minerals, which had long ago outgrown its narrow quarters. During 1877–78, these rooms were suitably fitted up for the exhibition of this valuable collection, at a cost of $3,166.90, chiefly for new cases. At the same time, the collection was secured as far as possible against destruction by fire, by carrying two brick fire-walls completely through the attic of the building, putting a fire-proof ceiling into the laboratory of organic chemistry, and placing iron doors in all the apertures in the brick partition which separates the Museum from the rest of the building. The cost of these safeguards was about $1,500.

The Mineral Museum is the product of the contributions and labors of many persons during the past sixty years; but for the last twenty-six years it has been under the charge of Professor J. P. Cooke, through whose disinterested and unremitting exertions it has grown rapidly, and has become, not only an effective instrument of instruction, but a beautiful and impressive representation of the mineral kingdom, unusually complete, and of large money value. More than ten thousand selected specimens are on exhibition, well mounted, neatly labelled and numbered, catalogued on cards, and, with the exception of the largest specimens, handsomely disposed in horizontal cases. The rooms and the cases afford ample space for the progressive increase of the collection during many years. It remains to secure a permanent fund to provide for the proper maintenance of the collection and its steady development.

During the years 1876–77 and 1877–78, Mr. Charles H. Moore, Instructor in Free-hand Drawing and Water-colors, was on leave of absence in Europe, and in each year $600 were placed at his disposal, wherewith to procure copies of paintings, photographs, sketches, and casts, which would be serviceable in giving instruction to his classes here. To this sum, a few hundred dollars were added by Professor Norton, from the regular appropriation annually made for the Fine Arts Department. Mr. Moore brought with him on his return a noteworthy collection of studies, fac-similes, sketches, casts, and photographs, far exceeding in value the modest sums placed at his disposition. These acquisitions, with the similar objects brought together by Mr. Moore during the five previous years of his connection with the College and the Scientific School as an instructor, form an interesting collection of peculiar merit. It is a collection expressly designed to illustrate such instruction in the fine arts as is appropriate to a University, — not professional training in the practice of any art, but liberal instruction in the fine arts considered as a branch of polite learning and as an element of great historical importance in the development of civilization.

On the 24th of June, 1878, the Corporation received a letter from Mr. Augustus Hemenway, of Boston, requesting that the lot on the corner of Cambridge Street and Holmes Place be assigned as the site of a gymnasium which he wished to erect for the use of the University. The Corporation had been for some months aware of Mr. Hemenway's generous intention, the plans of the building had been already prepared, the contracts were signed, and the work had begun. The Board hastened to record a vote appropriating to the Gymnasium the lot designated, and to send Mr. Hemenway their hearty thanks for his munificent and much-needed gift. The building has ever since that date been in process of construction; it is planned upon a very liberal scale, and is constructed within and without of the best and most durable materials. As it was begun somewhat late in the season, winter came on before the walls were finished, and the building is not yet (Jan. 4, 1879) closed in; but it will undoubtedly be ready for use at the opening of the next academic year.

In February, 1878, the Rev. Richard M. Hodges, a lifelong friend of the College, gave $5,000 to the President and Fellows, upon conditions set forth in a witnessed instrument which accompanied the gift. (See Appendix V.) The endowment was gladly accepted by the Corporation but it will not become available for the support of poor scholars for several years.

A third instalment of the Class Subscription Fund was paid into the College Treasury in May last, making a total receipt from this source of $120,000. This contribution of the Alumni to the unrestricted funds of the Corporation is not only large in actual amount, but useful out of all proportion to its amount, because the income is available for salaries and general expenses. It is also an encouraging evidence of the constant interest in the College of its increasing body of living graduates.

The committee of the College Faculty on the Examinations for Women present this year an interesting report, which covers the whole period of five years during which these examinations have been held. This report will be found in the Appendix (VI.). The tables appended to this report give all the facts concerning the individual candidates (designated by numbers, not by names) which are needed to enable any one familiar with the standard and method of the examinations to form an opinion upon the results of the system, so far, at least, as these results appear in the record of the candidates who have actually presented themselves. As the committee point out, the influence of the examinations is not to be measured by the number of candidates. The committee describe certain not unimportant modifications in the original scheme, which they have been led to adopt; and they state their reasons for declining to adopt other changes which have been suggested. The extension of the examinations to New York in 1877, and to Philadelphia and Cincinnati in 1878, has resulted in a considerable increase in the number of candidates. The attention of the Overseers is invited to the committee's opinion of the indirect effects of the examinations upon the education of girls. For the wise and successful conduct of the whole undertaking, so far as the action of the Faculty is concerned, the University is under great obligations to Professor Charles F. Dunbar, who has been from the first the chairman of the committee.

The financial condition of the University is perfectly exhibited in the Treasurer's Statement. The deficit of $6,374.65 in the combined accounts called University, College, and Library, is to be regretted, but is ascribable to certain exceptional expenditures of the year 1877–78. Thus, more than $3,000 were spent in that year upon improvements in Boylston Hall and the Mineral Museum; and more than $3,000 were also paid for furniture and fittings in the Library during the same year. These expenditures were both expedient; but they belong to the class of expenditures not indispensable. As the Treasurer points out, the Corporation expect, by reducing their least urgent expenses and shunning every extraordinary outlay, to avoid a deficit during the current year. The Sever Fund (unrestricted) of $20,000, and the new instalment of the Class Subscription Fund, also of $20,000, are, under the circumstances, peculiarly welcome additions to their resources. The needs of the Divinity School, Dental School, and Bussey Institution have been discussed above. The Law School, Medical School, and Scientific School had each a surplus in 1877–78. In all departments of the University, except the Bussey Institution, in which the fees are few in number, there was a diminution in the amount of receipts from students. The growth of the College proper, which was rapid from 1866 to 1876, has been arrested for two years past. In short, the University, like all institutions of education, religion, or charity, feels the pressure of the times. At present, however, the Corporation see no good reason to fear that it will become necessary to reduce salaries, diminish the number of teachers, or impair to any appreciable degree the activity and usefulness of the institution.

The usual list and statistics concerning the degrees, honors, and prizes given by the University, will be found in the Appendix (VII.–IX.), together with a list of the examining committees appointed by the Board of Overseers for 1877–78 (X.). The attention of the Overseers is invited to the following Reports of the Deans of the several Faculties, of the Librarian, and of the Directors of the Observatory, the Botanic Garden and Herbarium, and the Museum of Comparative Zoölogy.

CHARLES W. ELIOT, *President.*

Cambridge, Jan. 4, 1879.

REPORTS

OF THE

DEANS OF THE FACULTIES, OF THE LIBRARIAN, AND OF THE DIRECTORS OF THE OBSERVATORY, BOTANIC GARDEN AND ARBORETUM, AND MUSEUM OF COMPARATIVE ZOÖLOGY.

To the President of the University: —

Sir, — As Dean of the College Faculty, I have the honor to submit the following Report upon the administration of Harvard College during the academic year 1877–78: —

The number of undergraduates at the beginning of the year was eight hundred and thirteen, being ten less than the number at the beginning of the preceding year. This slight falling off, which is nearly made up by the number at the opening of the current year, is a fluctuation of little significance, and does not weaken the general conclusion that the College is holding its ground with great steadiness, in spite of the serious pecuniary difficulties which now beset a large proportion of the young men engaging in study. The changes of all kinds in the composition of the College classes, from October, 1877, to October, 1878, were as follows: —

Present Oct., 1877.		Left the Class.	Admitted Oct., 1878.	Present Oct., 1878.	
Seniors . .	168	Class graduated.			
Juniors . .	208	16	8	Seniors . .	200
Sophomores .	198	29	5	Juniors . .	174
Freshmen .	239	81	10	Sophomores .	218
			New class.	Freshmen .	227
	813				819

Of the whole number of students set down as having left their classes, twenty-nine either left College or were removed to some lower class in consequence of an unprofitable use of their time, twelve withdrew by reason of ill-health, seven from a general change of plan as to the future, and a considerable but not definitely ascertainable part of the remainder withdrew in consequence of financial embarrassment. Thirteen out of the whole number of students withdrawing have joined other classes, and are now in College. Three students died in the course of the year, — two of them, one Senior and one Junior, from cerebral disease, and one Freshman from pneumonia. The two former cases, together with such cases of failure of health as occurred, have been the subject of anxious consideration and discussion by the Faculty as well as by individual members of the College government, but without developing any general cause within the control of this body.

The tables on pages 54–62 give the names of the instructors in charge of the several courses of study, the number of students regularly attending each course, as shown by the returns at the close of the year, the number of sections in each course, and the number of exercises per week for students and for instructor.

In addition to the instruction given in the regular elective courses, a course of lectures on Medical Botany was given at the Botanic Garden by Professor Goodale, and was attended by Medical Students, and by Seniors intending to study medicine. It is designed to give this course every other year.

Instruction in Elocution was given during the year by Mr. George Riddle, to such students as desired it. The opportunity was used by sixty-four Seniors, twenty-four Juniors, thirty Sophomores, and twenty Freshmen, each of whom had one exercise per week. Mr. Riddle also gave instruction to the students of the Divinity School.

In addition to prescribed studies, every Senior had twelve exercises a week in elective courses, every Junior twelve, and every Sophomore ten. In the selection of these courses of study, it was the aim of the Faculty to allow entire freedom of choice, except so far as this might be limited by want of necessary training or by some positive disqualification; but, in one case, the great number of students who elected a favorite

PRESCRIBED STUDIES.

Instructors.	Subjects.	Text-books.	No. of Students.	No. of Sections.	Exercises per week for Students.	Exercises per week for Instructors.
		FRESHMEN.				
Prof. J. W. White and Mr. Croswell	Greek	Xenophon (Hellenica, Philpott's Selections; Memorabilia, Books I.-IV.). — Homer (Odyssey, Books I.-X.). — Goodwin's Greek Moods and Tenses. — Jebb's Greek Literature Primer. — Sidgwick's Greek Prose Composition. — Translation at sight	137	8	3	24
		[*Advanced Sections*]. — The above, and also Euripides (Alcestis or Medea)	74	2	3	6
Prof. Smith and Messrs. Hale and Gould	Latin	Livy (Selections from Books I.-V.). — Ihne's Early Rome. — Cicero (Walford's Extracts, Part I., in connection with Composition). — Horace (Odes and Epodes). — Schmitz's Latin Literature. — Extemporaneous Translation and Composition	165	8	3	24
		[*Advanced Sections*]. — The above	54	2	3	6
Messrs. Cook, Emerton, Faulhaber, and Sheldon	German	Whitney's, Peissner's, or Ahn's Grammar. — Evans's Otto's German Reader and Whitney's German Reader. — Selections. — Composition	197 2 Div.	8	3	24
Prof. Jacquinot	French	Otto's Grammar. — Bôcher's Reader. — Achard (Le Clos Pommier). — Sandeau (M'lle de la Seiglière). — Feuillet (Le Roman d'un Jeune Homme Pauvre)	28 1 Law 1 Sci.	1	3	3
Profs. J. M. Peirce, C. J. White, and Byerly, and Mr. Briggs	Mathematics	Solid Geometry (Chauvenet). — Plane Trigonometry (Wheeler). — Analytic Geometry (Lectures). — Algebra (Todhunter)	208	8	7 in two weeks	28
		[*Advanced Section.*] — Analytic Geometry (Salmon's Conic Sections). — Algebra (Todhunter)	11	1	7 in two weeks	3½
Mr. Willson	Physics	Deschanel's Natural Philosophy (Selections)	227	8	2	16
Prof. Cooke	Chemistry	Elementary Chemistry (Twenty-four Lectures)	225	1	1 from Nov. 1	1 from Nov. 1
		SOPHOMORES.				
Prof. A. S. Hill and Mr. Ware	Rhetoric	Hill's Principles of Rhetoric. — Abbott's How to Write Clearly	191 Soph. 3 Fresh.	4	2	8
Mr. Macvane	History	Freeman's Outlines of General History (to page 272)	193 Soph. 5 Fresh.	4	2 (for half-year)	8
		Flanders's Exposition of the Constitution of the United States. — Ewald's The Crown and its Advisers	187 Soph. 6 Fresh.	4	2 (for half-year)	
Mr. Perry	Themes	Six Themes, corrected and re-written	184			

		JUNIORS.				
Profs. Peabody and Palmer	Philosophy	Jevons's Logic	169 Jun. 26 Soph 1 Law		2 (for half-year)	
		Locke's Essay on Human Understanding	154 Jun. 23 Soph.		2 (for half-year)	
Prof. A. S. Hill and Mr. Ware	Themes	Six Themes, corrected and re-written	198			
Prof. Palmer	Forensics	Four Forensics	179			
		Theses substituted for Forensics, as allowed by the rules, by	18			
		SENIORS.				
Prof. Peabody	Forensics	Four Forensics	113			
		Written work substituted for one or more Forensics, as allowed by the rules, by	46			

ELECTIVE STUDIES.

Instructors.	Courses.	Subjects and Text-books.	No. of Students.	No. of Sections.	Exercises per week for Students.	Exercises per week for Instructors.
Prof. Young	Hebrew	Hahn's or Theile's Biblia Hebraica. — Conant's Gesenius's Grammar	2 Sen.	1	3	3
Prof. Anderson	Greek 1	Æschylus (Prometheus). — Herodotus (Book VI.) — Homer (Iliad)	2 Sen. 4 Jun. 25 Soph. 7 Fresh.	2	2	4
Prof. Anderson	Greek 2	Plato (Phædo), — Sophocles (Œdipus Tyrannus). — Lectures on Greek Philosophy	2 Sen. 8 Jun. 47 Soph. 3 Fresh.	2	2	4
Prof. Anderson	Greek 3	Greek Lyric Poetry and Anthology [Omitted in 1877–78.]				
Prof. Anderson	Greek 4	Greek Composition. — Sidgwick's Greek Prose Composition, Parts I. and II. — Written Translations	1 Sen. 3 Jun. 35 Soph. 3 Fresh.	2	1	2
Prof. Anderson	Greek 5	Advanced Greek Composition. — Sidgwick's Greek Prose Composition, Parts III. and IV. — Written Translations	4 Sen. 1 Jun.	1	1	1
Prof. Goodwin	Greek 6	Thucydides (Sicilian Expedition. — Sophocles (Antigone)	1 Sen. 3 Jun. 12 Soph.	1	2	2

ELECTIVE STUDIES—CONTINUED.

Prof. Sophocles	Greek 7	Arrian (Anabasis). — Polybius (Selections)	2 Sen. 2 Jun.	1	3	3
Prof. Goodwin	Greek 8	Demosthenes (on the Crown), with parts of Æschines against Ctesiphon. — Thucydides (parts of Books I., II., and III.). — Athenian History (Times of Pericles and Demosthenes)	3 Sen. 18 Jun. 3 Soph.	1	3	3
Prof. Goodwin	Greek 9	Æschylus (Eumenides). — Sophocles (Œdipus at Colonus). — Aristophanes (Knights or Acharnians). — Aristotle (Poetics)	9 Sen. 5 Jun. 1 Soph. 2 Grad.	1	2	2
Prof. Sophocles	Greek 10	Ecclesiastical Greek (Justin and Hippolytus). — Lectures on the early Christian sects	3 Sen. 4 Jun.	1	3	3
Prof. Goodwin	Greek 11	Plato (Gorgias and parts of the Phædrus). — Aristotle (Parts of the Politics)	10 Sen. 2 Jun. 1 Grad.	1	3	3
Prof. Anderson	Greek 12	Homeric Philology (Iliad, Books I.-III.)	8 Sen. 4 Jun.	1	1	1
Prof. Smith	Latin 1	Terence (Adelphi and Heautontimoroumenos). — Horace (Satires)	2 Sen. 1 Jun. 28 Soph. 3 Fresh.	2	2	4
Prof. Greenough	Latin 2	Cicero (Pro Murena). — Terence (Andria and Heautontimoroumenos). — Horace (Satires). — Translation at sight	1 Jun. 82 Soph. 7 Fresh.	3	2	6
Prof. Smith	Latin 3	Tacitus (Germania and Agricola). — Juvenal	2 Sen. 1 Jun. 14 Soph.	1	2	2
Prof. Smith	Latin 4	Latin Composition and Written Translations (First Course)	4 Sen. 1 Jun. 39 Soph. 3 Fresh. 1 Grad.	2	1	2
Prof. Greenough	Latin 5	Cicero (De Natura Deorum; De Finibus). — Lucretius	2 Sen. 12 Jun. 1 Soph. 1 Fresh.	1	3	3
Prof. Lane	Latin 6	Tacitus (Annals). — Suetonius. — Horace (Epistles)	4 Sen. 45 Jun. 8 Soph. 1 Fresh.	2	3	6
Prof. Smith	Latin 7	Latin Composition and Written Translations (Second Course)	1 Sen. 3 Jun. 1 Soph.	1	1	1
Prof. Lane	Latin 8	Plautus (Amphitruo). — Cicero (Verres IV., V.) — Catullus	22 Sen. 4 Jun. 2 Grad.	1	3	3

Prof. Lane	Latin 9	Latin Composition (Third Course) [Omitted in 1877-78.]				
Prof. Lane	Latin 10	Latin Inscriptions, Orthography, and Pronunciation. — Quintilian (Book I.)	3 Sen.	1	1	1
Dr. E. Young	Latin 11	Elements of Roman Law. — Institutes of Gaius and of Justinian. — Demangeat's Cours de Droit Romain. — Keller (Der Römische Civilprocess)	10 Sen. 7 Jun. 1 Grad.	1	3	3
Prof. Child	English 1	English Literature. — Chaucer. — Bacon. — Milton. — Dryden	5 Sen. 11 Jun. 1 Soph. 1 Grad.	1	3	3
Prof. Child	English 2	English Literature. — Shakspere	13 Sen. 16 Jun. 6 Soph. 1 Fresh.	1	3	3
Prof. Child	English 3	English. — Sweet's Anglo-Saxon Reader. — Selections in Early English Literature. — Lectures	1 Jun. 2 Soph.	1	2	2
Prof. Child	English 4	Anglo-Saxon and Early English. — Beówulf (ed. M. Heyne). — Mätzner's Altenglische Sprachproben	1 Sen. 1 Jun.	1	3	3
Prof. A. S. Hill	English 5	Advanced Course in Rhetoric and Themes	20 Sen. 11 Jun.	1	3	3
Mr. Cook	German 1	Hauff's Mährchen. — German Composition	4 Jun. 44 Soph. 2 Fresh.	2	2	4
Prof. Bartlett	German 2	Modern German Authors (chiefly Prose). — 'Selections from Heyse's Deutscher Novellenschatz	1 Sen. 5 Jun. 35 Soph.	3	2	6
Prof. Bartlett	German 3	German Historical Prose (First Course). — Freytag's Aus Neuer Zeit. — Der Neue Plutarch, Vols. I. and II.	2 Sen. 9 Jun. 10 Soph. 1 Fresh.	1	3	3
Mr. H. B. Hodges	German 4	German Scientific Prose	6 Sen. 6 Jun. 3 Soph. 1 Unm.	1	2	2
Prof. Bartlett	German 5	German Composition and Oral Exercises. — Grossmann's Handbuch der Deutscher Literatur. — Selections in Prose and Poetry	6 Jun. 2 Soph.	1	1	1
Prof. Bartlett	German 6	German Historical Prose (Second Course). — Biographies of Luther, Franz v. Sickingen, Cromwell, and Philip II. — Giesebrecht's Deutscher Kaiserzeit. — Scherr's Cultur- und Sittengeschichte	7 Sen. 14 Jun. 6 Soph. 1 Fresh.	1	3	3
Mr. Cook	German 7	Goethe's Reinecke Fuchs and Egmont and Selections from Goethe's Prose Writings. — Schiller's Jungfrau von Orleans. — German Composition	7 Sen. 41 Jun. 7 Soph. 1 Fresh.	2	3	6
Prof. Hedge	German 8	Richter (Flegeljahre). — Goethe (Faust, Iphigenia, Lyrics). — German Composition	18 Sen. 2 Jun.	1	3	3

ELECTIVE STUDIES — Continued.

Prof. Jacquinot	French 1	Sevrette (Recueil de Morceaux Choisis). — Sandeau (Sacs et Parchemins). — About (Les Mariages de Paris)	6 Sen. 17 Jun. 55 Soph. 10 Fresh	3	2 or 3	9
Prof. Bôcher	French 2	Molière (fourteen comedies). — La Fontaine (Fables). — Racine (Andromaque). — Cherbulier (Prosper Randoce). — Composition	1 Law 5 Sci. 1 Unm. 8 Sen. 26 Jun. 34 Soph. 1 Fresh.	2	3	6
Prof. Bôcher	French 3	Darmester (Morceaux choisis des Ecrivains du XVIme siècle). — Molière (three comedies). — Corneille (Le Cid) — Regnard (Le Joueur). — Brueys et Palaprat (Le Grondeur). — Composition. — Lectures	12 Sen. 8 Jun. 10 Soph. 2 Fresh.	1	3	3
Prof. Jacquinot	French 4	P. Albert (Littérature française au XVIIme siècle). — Cousin (Madame de Sablé) — Corneille (Le Cid). — Molière (Le Misanthrope). — Racine (Phèdre). — La Rochefoucauld (Maximes) — La Bruyère (Caractères). — Fénelon (Lettre à l'Académie française). — Five Themes in French. — Lectures	6 Sen. 8 Jun. 4 Soph. 1 Fresh.	1	3	3
Prof. Bôcher	French 5	Chanson de Roland. — Bartsch (Chrestomathie de l'ancien français). — Lectures	1 Sen. 2 Jun. 1 Soph.	1	3	3
Prof. Nash	Italian 1	Silvio Pellico (Le Mie Prigioni). — Grammar. — Composition	1 Sen. 10 Jun. 16 Soph.	1	2	2
Mr. Sheldon	Italian 2	Silvio Pellico (Francesca da Rimini). — Manzoni (I Promessi Sposi). — Tasso. — Composition	6 Sen. 10 Jun. 4 Soph. 1 Law	1	3	3
Prof. Nash	Italian 3	Early Italian Literature. — Dante. — Petrarca	5 Sen.	1	3	3
Prof. Nash	Spanish 1	Gil Blas. — Josse's Spanish Grammar. — Composition	13 Sen. 9 Jun. 16 Soph. 3 Fresh.	1	3	3
Mr. Sheldon	Spanish 2	Modern Spanish Plays (Moratin; Hartzenbusch). — Composition	10 Sen. 5 Jun. 3 Soph.	1	3	3
Prof. Nash	Spanish 3	Early Spanish Literature. — Cervantes (Don Quixote). — Calderon. — Poem of the Cid	3 Sen.	1	3	3
Prof. Palmer	Philosophy 1	Descartes. — Malebranche. — Berkeley. — Hume	3 Sen. 42 Jun.	2	3	6
Prof. Bowen	Philosophy 2	Bouillier, Histoire de la Philosophie Cartésienne. — Kant's Critique of Pure Reason — Schwegler's History of Modern Philosophy. — Lectures on French and German Philosophy	34 Sen. 8 Jun. 1 Div. 1 Law	1 and 2	3	4
Prof. Bowen	Philosophy 3	Schopenhauer's Die Welt als Wille und Vorstellung. — Hartmann's Philosophie des Unbewussten	13 Sen.	1	3	3

Prof. James	Philosophy 4	Psychology. — Taine on Intelligence. — Lectures	11 Sen. 10 Jun. 1 Soph. 1 Grad.	1	3	3
Prof. Peabody	Philosophy 5	Ethics. — Grote's Treatise on the Moral Ideals. — Cicero de Officiis. — Lectures	28 Sen. 27 Jun. 4 Soph.	1	3	3
Prof. Dunbar and Mr. Macvane	Philosophy 6	Political Economy. — J. S. Mill's Political Economy. — Bagehot's Lombard Street. — Financial Legislation of the United States. — Lectures	25 Sen. 72 Jun. 9 Soph. 1 Fresh. 1 Unm.	2	3	6
Prof. Dunbar	Philosophy 7	Advanced Political Economy. — Cairnes's Leading Principles of Political Economy. — McKean's Condensation of Carey's Social Science. — Lectures	22 Sen. 5 Jun. 1 Grad.	1	3	3
Dr. Emerton	History 1	Roman Constitutional History, to the reign of Diocletian	1 Sen. 2 Jun. 7 Soph.	1	2	2
Dr. Emerton	History 2	The General History of Europe from the Tenth to the Sixteenth Century	3 Jun. 6 Soph. 1 Grad.	1	3	3
Dr. E. Young	History 3	Mediæval Institutions (Advanced Course)	1 Jun. 1 Grad.	1	3	3
Dr. E. Young	History 4	History of England to the Seventeenth Century (Constitutional and Legal)	9 Sen. 7 Jun. 5 Soph.	1	3	3
Dr. Lodge	History 5	Colonial History of America to the year 1789	1 Sen. 6 Jun. 22 Soph.	1	3	3
Dr. Lodge	History 7	History of the United States from 1789 to 1840	19 Sen. 18 Jun. 7 Soph. 1 Fresh.	1	3	3
Prof. Torrey	History 8	European History during the Seventeenth Century and first half of the Eighteenth [Omitted in 1877–78.]				
Prof. Torrey	History 9	European History from the Middle of the Eighteenth Century	58 Sen. 56 Jun. 1 Grad. 2 Unm.	2	3	6
Prof. Torrey	History 10	History of Modern Treaties; Elements of Public International Law	10 Sen.	1	3	3
Prof. C. J. White	Mathematics 1	Practical Applications of Trigonometry. — Principles of Surveying. — Spherical Trigonometry and its Applications to Astronomy and Navigation	1 Jun. 14 Soph. 1 Fresh.	1	2	2
Prof. Byerly	Mathematics 2	Differential and Integral Calculus (Elementary Course)	2 Sen. 3 Jun. 48 Soph. 1 Fresh.	1	2	2

ELECTIVE STUDIES — CONTINUED.

Prof. J. M. Peirce	Mathematics 3	Theory of Equations, including Determinants	5 Soph.	1	2	2
Prof. Byerly	Mathematics 4	Analytic Geometry (for students who had not taken the Advanced Freshman Course)	1 Sen. 1 Jun. 12 Soph.	1	2	2
Prof. J. M. Peirce	Mathematics 5	Differential and Integral Calculus (Second Course)	4 Jun.	1	3	3
Prof. Byerly	Mathematics 6	Modern Methods in Analytic Geometry (for students who had taken an Advanced Course in Analytic Geometry	1 Sen. 2 Jun. 7 Soph.	1	2	2
Prof. Eustis	Mathematics 7	Descriptive Geometry and Perspective	1 Sen. 1 Soph.	1	3	3
Prof. J. M. Peirce	Mathematics 8	Quaternions	1 Sen. 1 Jun.	1	1	1
Prof. Lovering	Physics 1	Astronomy, Optics, and Acoustics	2 Sen. 26 Jun. 8 Soph. 1 Grad.	1	2 or 3	3
Prof. Trowbridge	Physics 2	Practical Exercises in the Laboratory, including the use of instruments of precision in testing the Laws of Mechanics, Acoustics, Optics, Magnetism, and Electricity; and an extended course in Electrical Measurements	10 Sen. 6 Jun. 1 Soph. 3 Sci. 1 Unm.	1	3	3
Prof. Trowbridge	Physics 3	Mathematical Physics (Thomson and Tait's Elements of Natural Philosophy, Part I.)	1 Sen. 2 Jun. 1 Sci.	1	3	3
Trof. Trowbridge	Physics 4	Mathematical Physics (Maxwell's Electricity and Magnetism) [Not taken in 1877-78.]				
Prof. Lovering	Physics 5	Undulatory Theory of Light. — Electricity and Magnetism	1 Sen. 2 Grad. 1 Sci.	1	3	3
Prof. Gibbs	Physics 6	The Spectroscope and its Applications. — Thermodynamics and Thermics, including the Applications of Heat	3 Sen.	1	3	3
Prof. Jackson	Chemistry 1	Descriptive Chemistry (with Laboratory Work)	9 Jun. 52 Soph. 3 Fresh. 1 Grad. 4 Unm. 5 Sci.	4	2 or 3	9
Prof. Cooke and Mr. Melville	Chemistry 2	Determinative Mineralogy and Lithology (with study in the Mineral Cabinet)	5 Sen. 10 Jun. 6 Soph. 2 Fresh. 2 Grad. 9 Sci. 1 Div. 1 Unm.	1	3	3

Prof. H. B. Hill	Chemistry 3	Qualitative Analysis and Chemical Philosophy (with Laboratory Work)	4 Sen. 35 Jun. 2 Soph. 1 Fresh. 2 Unm.	1	3	3
Prof. Cooke and Mr. Hodges	Chemistry 4	Quantitative Analysis (in the Laboratory)	2 Sen. 4 Jun. 1 Fresh. 1 Grad. 1 Unm. 2 Sci.	1	3	3
Prof. H. B. Hill	Chemistry 5	The Carbon Compounds, Theoretical and Experimental (Lectures and Laboratory Work)	6 Sen.	1	3	3
Prof. Cooke	Chemistry 6	Advanced Course in Experimental Chemistry (in the Laboratory)	1 Sen.	1	3	3
Prof. Cooke	Chemistry 7	Crystallography and the Physics of Crystals (with work in the Mineral Cabinet)	1 Sen.	1	3	3
Profs. Whitney and Shaler and Mr. Wadsworth	Natural Hist. 1	Physical Geography and Structural Geology	2 Sen. 13 Jun. 15 Soph. 1 Fresh.	1	2	2
Prof. Hagen	Natural Hist. 2	General Entomology. — Laboratory Work [Not taken in 1877–78.]				
Prof. James	Natural Hist. 3	Comparative Anatomy and Physiology of Vertebrates. — Mivart's Anatomy. — Küss's Physiology. — Lectures	35 Sen. 48 Jun. 2 Soph.	1	3	3
Dr. Faxon and Dr. Mark	Natural Hist. 4	Zoölogy (Elementary Course)	2 Sen. 5 Jun. 5 Soph.	1	3	3
Prof. Shaler	Natural Hist. 5	Geology. — Lyell's Elements. — Lectures, Laboratory Practice, and Field Work	17 Sen. 29 Jun. 5 Soph. 1 Grad.	1	3	3
Prof. Shaler	Natural Hist. 6	Palæontology. — Nicholson's Palæontology	9 Sen. 5 Jun. 2 Grad.	1	3	3
	Natural Hist. 7	Zoölogy (Advanced Course) [Omitted in 1877–78.]				
Prof. Goodale	Natural Hist. 8	Elementary Botany. — Gray's Structural and Systematic Botany	30 Sen. 29 Jun. 11 Soph. 2 Grad.	1	2 of 1½ h.	3
Profs. Goodale and Farlow	Natural Hist. 9	Advanced Botany. — Lectures and Laboratory Practice	4 Sen. 1 Jun. 1 Div.	1	2 of 1½ h.	3
Prof. Whitney	Natural Hist. 10	Economic Geology	2 Sen. 2 Jun. 1 Soph.	1	2	2
Prof. Paine	Music 1	Harmony	3 Jun. 4 Soph.	1	2	2
Prof. Paine	Music 2	Counterpoint	4 Jun. 2 Soph.	1	3	3

ELECTIVE STUDIES — CONTINUED.

Prof. Paine	Music 3	Canon and Fugue	1 Sen. 1 Jun.	1	3	3
Prof. Paine	Music 4	History of Music	2 Sen. 3 Jun. 1 Soph.	1	3	3
Prof. Paine	Music 5	The Instrumental Music of Haydn, Mozart, Beethoven, and their successors	1 Jun. 2 Soph.	1	1	1
Mr. Moore	Fine Arts 1	Principles of Design in Painting, Sculpture, and Architecture [Omitted in 1877–78.]				
Prof. Norton	Fine Arts 2	History of the Fine Arts of Construction and Design, and their Relations to Literature. — Oriental, Egyptian, Greek, Roman and Medieval Art, and the Italian Renaissance	32 Sen. 26 Jun. 7 Soph. 2 Fresh. 1 Grad. 1 Sci.	1	3	3
Prof. Norton	Fine Arts 3	Ancient Art. — Müller's Ancient Art, translated by Leitch	4 Sen. 5 Jun. 1 Soph.	1	3	3

course made it necessary to reduce the divisions to manageable limits, by excluding a part of those who were believed to be least likely to profit by the study. The difficulties, however, of adjusting the hours and places of instruction and examination, so as to meet all possible combinations of studies, have increased so rapidly, with the increase in the number of elective studies and of students alike, that it seems scarcely doubtful that it will soon become necessary to arrange the scheme of hours with reference to the natural and usual combinations of studies, and without regard to the possibility of eccentric choices. This can be done, it is believed, without seriously trenching upon the substantial freedom of well-considered election, which it is the object of the present system to secure.

The system of public mid-year and final examinations, amounting to six hours in each elective study and conducted in writing, has been continued as heretofore. The Freshman Class also had three stated examinations in the course of the year upon all their studies; and in many courses, both elective and prescribed, examinations of one hour in length were also held, at the discretion of the instructor. So far as any change of practice is observed, it is in most cases in favor of a tolerably frequent test of the student's progress, which shall leave less to be determined by the result of a single final effort.

The names of the students who received academic honors, or to whom honors or prizes of any kind were awarded during the year, are given in a statement which accompanies this Report (see Appendix VIII., IX.). Attention is invited to the marked increase of interest in the competition for the Bowdoin prizes for dissertations.

Under the rules of the Faculty, any student who does not secure forty per cent of the maximum mark on the average of all his studies is required to join a lower class, failure to reach this minimum of attainment indicating such general deficiency as unfits him for proceeding with his own class, or receiving his degree with them. At the close of the last year, this rule was enforced in the case of three Seniors, two Juniors, four Sophomores, and sixteen Freshmen. Of these twenty-five students, ten are now in College as members of some lower class. To the number of students thus removed from their classes at the end of the year should also be added a smaller number, who withdrew from

College at an earlier period, in consequence of the probability of a like result. The following table will show the number of students either removed or withdrawing from their classes by reason of failure in scholarship, for the last five years: —

	1874.	1875.	1876.	1877.	1878.
Removed to lower classes . . .	13	19	28	17	25
Withdrawn during the year . .	10	13	8	16	4
Total.	23	32	36	33	29
Whole number of students .	706	716	776	828	818

For less serious deficiencies, two hundred and thirty students were notified that they must repeat the work in one or more studies, or perform its equivalent, and must pass satisfactory examinations thereon, as the condition of being finally recommended for a degree.

Fifteen Seniors failed to receive the Bachelor's degree at the end of the year. Of these fifteen, three, already referred to, failed on the work of the Senior year, and must accordingly pass through that year with some future class, in order to be recommended for a degree. Four were deficient in some part of the work of the Senior year, two were deficient in some part of the work of some previous year, three had deficiencies both in the Senior year and in some previous year, one had failed to receive the general credit necessary for graduation, and one was compelled by illness to withdraw from the final examination; making in all eleven who can obtain the degree whenever they shall have made up their deficiencies in the manner prescribed by the rules. One Senior also withdrew from the final examinations, being in imminent danger of complete failure, and will probably be required to repeat the year before he can be recommended for a degree. For the past four years, the number of Seniors failing to obtain their degrees has been as follows: —

	1875.	1876.	1877.	1878.
Passed in all their work	133	135	170	144
Failed, but can make up	11	6	17	11
Failed, and must repeat the year	2	3	2	4

Seventeen students were suspended in the course of the year. Seven of these were suspended for periods not exceeding three months, — four for irregularity of attendance or some failure of prescribed duty, and three for violations of order. Five were suspended for periods not exceeding four months, for dishonesty at examinations; and five for terms ranging from four to five and a half months, for serious offences against good conduct. To these cases of ordinary discipline must be added four cases in which the Faculty inflicted the unusual penalty of dismissal upon students detected in surreptitiously obtaining examination papers from the College printing-office, or in using papers thus obtained. The offence thus committed implied such a complete disregard both of duty and of honor, that the Faculty felt compelled to make an example by inflicting the highest penalty save that of expulsion. Investigation showed that the question papers divulged had been obtained through the corruption of a subordinate in the printing-office, and made it certain that only a small proportion of the examinations had thus been vitiated. A radical change in the whole system of printing was made in season for the annual examinations, which precludes all suspicion as to the entire purity of that important test of the year's work.

The unusual proportion of penalties inflicted as above stated, for grave offences, deserves attention, and is the subject of deep regret. It must be observed, however, that in three instances several offenders were found implicated in the same breach of discipline, so that the result is in large part due to a few cases of disorder, and not to any long series of offences. Indeed, the general condition of the College has been one of satisfactory order and regularity, only an insignificant proportion of the whole mass of eight hundred students failing to respond cheerfully to the demands made upon them by the College regulations and by the recognized rules of gentlemanly conduct.

In order to obviate the confusion and delay which has usually occurred at the beginning of the College year, the Faculty, at the beginning of the year 1877–78, required all students to appear in person, and register themselves as present on the first day of the year, with cumulative penalties for every day's omission to do so. This regulation was carried out with little inconvenience, and led to an unusually prompt organization of the classes, and thus obviated the serious loss of time for instruction which has hitherto been complained of. The regulation has been made permanent; and its easy operation may hereafter be found to suggest the means, not only of insuring the prompt reassembling of students after any temporary dispersion, but of improving the present methods of securing evidence as to continuity of residence.

Preparatory Studies. At the last examination for admission to College, candidates were examined upon the new method, described in my last report, as well as upon the old. Several of the leading preparatory schools changed their system of instruction promptly upon the announcement of the new method, so that a large number of students who had had their training thus far upon the old system completed their preparation upon the new. The success with which this was done makes it certain that the new requisitions demand no increase in the time needed for preparation. The short time, however, for which any of those admitted had been trained upon the new method also makes it difficult to judge with certainty of the effect of the change upon the work of the Freshman year. So far as any indications can be found at present, they point to increased ability to carry on the Freshman studies with success and profit; but more experience, on the part of teachers and of candidates alike, is needed, before conclusions of much importance can be fairly drawn.

The whole number of applicants for admission in 1878 was two hundred and ninety-four, of whom one hundred and thirty-three presented themselves upon Method I., with the following results: —

METHOD I.

1878. 133 Candidates.	MINIMUM REQUISITIONS.										
	Caesar and Virgil.	Latin at sight and Comp.	Xenophon or Reader.	Greek Sentences.	Ancient History and Geography.	Arithmetic.	Algebra.	Plane Geometry.	Minimum Physics.	English Composition.	French or German.
Percentage failing in each study.	14	07.5	29	18	20	13	31.5	43	14	19	36

	MAXIMUM REQUISITIONS.								
	Cicero and Virgil.	Latin at sight and Comp.	Herodotus.	Greek Comp.	Iliad.	Trigonometry.	Solid Geometry.	Maximum Physics.	Chem. or Botany.
Percentage failing in each study.	7	15	17.5	36	21	29	65	38	57

The corresponding results of the examination upon Course I. of the old method for the last three years are as follows: —

METHOD II., COURSE I.

1876, Total No. 250 1877, " " 286 1878, " " 147	Latin Grammar.	Latin Comp.	Caesar, Sallust, and Ovid.	Cicero and Virgil.	Greek Grammar.	Greek Comp.	Greek Prose Authors.	Greek Poetry.	Arithmetic.	Algebra.	Geometry.	Geography.	Ancient History.	English Comp.	French or German.	Elementary Science.
Percentage of candidates who failed in each study.																
1876	20	25	25	16	16	27	25	20	28	45	31	12	16	11		19
1877	19	24	9	8	19	35	30	22	22	41	40	14	16	15	34	18
1878	24	27	10	9	20	43	30	16	19	37	43	18	18	21	42	14

The comparative statement of the proportion of candidates admitted without conditions or rejected, upon the two methods respectively, is as follows: —

	Percentage admitted without conditions.	Percentage rejected.
Method I., 1878 . .	34	18
Method II., 1876 . .	24	15
1877 . .	29	17
1878 . .	19	14

Fourteen candidates not included in the above table also offered themselves upon Course II. of the old method, but only three were admitted.

The examination of candidates in the translation at sight of easy French or German prose has had the following results in the last four years: —

	1875.	1876.	1877.	1878.
Candidates examined in French or German	318	247	295	274
Percentage offering French	92½	88	90½	91
Percentage of failure among those offering French . .	41	36	33	36
Percentage offering German	7½	12	9½	9
Percentage of failure among those offering German . .	21	21	18	25

In accordance with the determination previously announced, the preliminary examination, in 1878, for candidates wishing to divide their examinations between two years, was held in June only. It was also determined by the Faculty that candidates should be examined only in those subjects in which their teachers should certify that their preparation was sufficient. This regulation was intended to check the growing disposition of applicants to try their chances in subjects in which their preparation was scanty, and, in the event of success, to neglect such subjects in preparing for the rest of the examination. It was found advisable to bring this practice to an end, in order to enable the preparatory schools to divide their work more systematically, and to insure the full attention of their pupils in the latter part of the preparatory course. In addition to this regulation, the Faculty also decided to limit the preliminary examination of candidates prepared upon the new method to the prescribed or minimum subjects, reserving the advanced or maximum subjects until their final examination for admission. The requisition of the teacher's certificate, and the fact that this was the first trial of Method I., preclude any fair comparisons of the results of the examination upon particular subjects with the results in former years. The total numbers of candidates presented in the last five years, and their success in securing credit for their work, may be compared, however, as follows: —

	Candidates.	In Four Subjects.	In Five Subjects.	In Six Subjects.	In Seven Subjects.	In Eight Subjects.	In Nine Subjects.	In Ten Subjects.	In Eleven Subjects.	In Twelve Subjects.	In Thirteen Subjects.	In Fourteen Subjects.	In Fifteen Subjects.	Without Certificate.	
														Failed to pass in Four Subjects.	Failed to pass in Five Subjects.
1874.	181	33	34	21	34	9	2	1	1	1	0	0	0	45	
1875.	198	40	39	31	21	13	7	0	1	0	0	0	0	46	
1876.	261		37	31	42	30	16	12	6	4	0	1	0		82
1877.	258		40	30	34	27	24	13	11	8	4	0	1		66
1878 Meth. I.	133		16	20	12	15	18	6							46
1878 Meth. II.	108		20	20	6	8	6	6	3	1	2				36

In examining the above return it must be remembered, that under the old method, candidates are allowed to present as many as they please of the sixteen subjects required for admission, while under the new method they are restricted, as above stated, to the eleven prescribed subjects.

The results of examination in the several subjects under Method I. are as follows: —

Preliminary Examination. METHOD I. 133 Candidates.	Cæsar and Virgil.	Latin at Sight.	Xenophon or Greek Reader.	Greek Sentences.	Ancient History and Geography.	Arithmetic.	Algebra.	Geometry.	Physics.	English.	French.	German.
Percentage of the whole number of candidates who were examined in each study	95	86	69	71	78	90	71	29	71	82	60	6
Percentage of failure among those examined in each study .	33	28	30	47	40	14	38	72	20	34	26	50

The following table gives the results of the preliminary examination upon Course I. of the old method, which was held at the same time with that upon the new method: —

Preliminary Examinat'n. METHOD II. COURSE I. 103 Candidates.	Arithmetic.	Algebra.	Latin Grammar.	Ancient History and Geography.	Modern and Physical Geography.	Cæsar, Sallust, and Ovid.	Greek Grammar.	Latin Comp.	English Comp.	Plane Geometry.	Greek Comp.	Greek Authors (Prose).	Greek Authors (Poetry).	Cicero and Virgil.	French.	German.	Elementary Science.
Percentage of the whole number of candidates who were examined in each study.	93	78	91	73	79	68	75	51	82	66	30	15	13	21	51	8	78
Percentage of failure among those examined in each study. . . .	39	61	69	28	33	27	45	59	43	63	48	38	23	23	51	12	24

Five candidates, not included in the above tables, were examined upon Course II., of whom three received certificates.

While the new method, considered as an improvement in the study of the classics, still needs the test of experience, the trial made this year removes all doubt as to its superiority as a method of examination. It is no small advantage that its arrangement of topics allows a more natural division between the preliminary and the final examinations than has been possible heretofore, and thus promotes a more systematic and thorough preparation. It is the intention of the Faculty, therefore, to drop the examination upon the old method after the summer of 1880, with due consideration, of course, for the special needs of such candidates as may already have begun their preparation, or may have advanced too far in their work for change, before learning of the existence of the new method.

Anticipation of Prescribed Studies. Of twenty Freshmen who passed upon prescribed work for the year 1877–78, at the beginning of the year, seven passed on the Latin of the Freshman year, eight on the Greek, five on a part or the whole of the mathematics, one on the physics, and nine who had passed in French also passed in German. Elective courses were taken in place of the studies thus anticipated, enabling the students in question to secure the benefit of their advanced preparation.

The number of students passing, by anticipation, the prescribed studies of the Sophomore and Junior years was as follows : —

	Number of Class.	Logic.	Metaphysics.	Rhetoric.	History: First Half.	History: Second Half.
Juniors	208	77	45			
Sophomores	196	2	11	25	61	83

The consolidation of the rhetoric formerly studied in the Junior and Sophomore years into a single course of continuous study for Sophomores has much diminished the numbers anticipating that branch, still leaving it within the power of serious students to enjoy the advantages which the privilege was intended to secure. It is highly probable that a similar consolidation of the imperfectly united halves of the Sophomore history would also have a healthy tendency in the same direction.

Elective Studies. The increasing number of graduates studying at the University for the higher degrees has made it necessary to establish for them a considerable number of special courses; and, in order to present in systematic arrangement the regular instruction which is particularly adapted to this class of students, the Faculty have removed from the list of College studies several of the more advanced elective courses, which have been pursued heretofore by graduates and undergraduates alike, and have placed them in the list of "Courses of Instruction for Bachelors of Arts." The courses which have thus disappeared from the list of ordinary elective studies are the second course in Sanskrit, the courses in Ecclesiastical Greek, Homeric Philology, and Latin Inscriptions, Orthography and Pronunciation, those in Roman Law and International Law, one of the courses in Mathematical Physics, those in Entomology, Palæontology, and Economic Geology, and one course in Music. The union of these courses with those established for graduates, as above stated, makes a body of thirty-eight courses of instruction available in nearly all cases at the beginning of the present year for such students, in addition to the College elective studies, to which they are also admitted.

After the removal from the list of undergraduate studies of the eleven courses above named, a new course in English was established, to be given by the Boylston Professor, and open to

Seniors only, for the purpose of testing the practicability of instruction in oral discussion; a course in Historical French Prose was established, to be given by Mr. Bendelari; an advanced course in German Literature since 1750, by Professor Bartlett, was opened, and the more elementary course in Modern German Authors previously given by him was discontinued; the first course in Italian was made a three-hour course, in order to give it greater solidity; in History, the course upon Mediæval Institutions was discontinued, and one to be given by Dr. Emerton upon the Revival of Learning and the Reformation was established; some rearrangement was made of the courses in Mathematics, to meet the known wants of advanced students; and the course in Fine Arts, by Mr. Moore, was resumed. The effect of all these changes was an apparent diminution of the number of courses of instruction designed especially for undergraduates from one hundred and five to ninety-two; but as undergraduates are admitted to graduate courses by special vote of the Faculty, upon satisfactory evidence of their ability to carry on advanced study with profit, it will be seen that the opportunities of study actually offered to them have in fact been materially increased.

Voluntary Attendance upon Recitations. The regulation by which Seniors are freed from penalties for absence from recitations was applied during the last year, under conditions somewhat different from those of the three previous years. In pursuance of a vote of the Faculty, explained at the close of my last annual report, any Senior whose scholarship in the Junior year did not entitle him to a mark of seventy per cent was liable to a temporary deprivation of the privilege of voluntary attendance, in case he appeared to use it improperly. The actual suspension of this privilege in some cases, and the fear of losing it in others, of course affected the operation of the system in the lower half of the class, and therefore affects the comparison which is made with the experience of past years. With this caution as to the presence of a new element in the case, I present the following table, in which the Class of 1878 is divided into four alphabetical sections, throwing out all of its members who, for any reason, had long periods of continuous absence in either the Junior or the Senior year, who were present only in the latter year, or whose record for two years is in other respects imperfect: —

	Number of Students.	Exercises in Junior year.	Average of absences in Junior year.	Average of excused absences in Junior year.	Exercises in Senior year.	Average of absences in Senior year.	Average of excused absences in Senior year.	Average percentage for scholarship in Junior year.	Average percentage for scholarship in Senior year.
Class of 1878, 1st quarter .	33		30	22		59	13	.67	.74
" " 2d " .	33		33	24		66	10	.67	.71
" " 3d " .	33		22	15		64	11	.70	.74
" " 4th " .	33		24	17		57	11	.69	.74
Whole Class of 1878 . . .	132	400	27	19	360	61	11	.68	.74
" " " 1877 . . .	162	400	23	15	360	69	8	.69	.71
" " " 1876 . . .	127	400	23	16	360	62	9	.68	.70½
" " " 1875 . . .	137	400	25	16	360	66	8	.69	.74
" " " 1874* . . .	161	400	28	14	360	23	14	.70	.75

* The last year of required attendance for Seniors.

The result in the above table which is most clearly traceable to the new regulation is the moderate increase in the proportion of excused absences, arising from the fact that a considerable part of the class, during the last year, found it for their interest to present excuses for necessary absences, which was not the case so long as the privilege of voluntary attendance was enjoyed without restriction. The imperfect operation of this motive, however, where it was present, and its complete absence from the minds of the upper half of the class, make it impossible to draw the line between unavoidable absences and those taken by the student in the exercise of his privilege. It is necessary, therefore, as in previous years, to limit our comparison to the total numbers of absences, without attempting to distinguish between those which were excused and those which were not. So far as the total numbers of absences are concerned, then, it will be seen that the average number of absences of the one hundred and thirty-two students whose records are considered in the above table is somewhat smaller than the similar average for either of the past three years. The gain in scholarship, so far as shown by a comparison of marks with those of the same class for the Junior year, is also more marked than in either of the last four years. This circumstance is no doubt due in part to the accidental composition of the class and its comparatively small number of incorrigible idlers, but in part also, as will presently appear, to an unusual pressure acting upon the lower students of the class.

In Junior year.	Of the members of the Class of 1878 there were absent,	In Senior year.	Average number of absences of these Seniors in their Junior year.	Average percentage of these in Junior year.	Average percentage of these in Senior year.	Average gain in Senior year.	No. between 100–95%.	No. between 95–90%.	No. between 90–85%.	No. between 85–80%.	No. between 80–75%.	No. between 75–70%.	No. between 70–65%.	No. between 65–60%.	No. between 60–55%.	No. between 55–50%.	No. below 50%.	Whose percentage in Senior was less than in Junior year.
37	between 0–10 times . . .	7	11	81	86	5	1	1	1	4								0
34	„ 10–20 „ . . .	14	13	78	83	5		3	3	3	2	1	1	1				3
15	„ 20–30 „ . . .	11	10	75	79	4		2	1	2	2	3			1			3
15	„ 30–40 „ . . .	11	28	68	76	8		2	1	2	2			2	2			2
10	„ 40–50 „ . . .	14	16	68	77	9		2	3	1	2	1	3	2				2
7	„ 50–60 „ . . .	20	29	61	72	11		1		1	6	4	3	5				
6	„ 60–70 „ . . .	9	27	69	73	4		1		1	1	1	3	1	1			2
1	„ 70–80 „ . . .	9	34	69	69			1			2	1		3	1	1		4
5	„ 80–90 „ . . .	8	36	66	70	4				1	1	1	3	2				2
2	„ 90–100 „ . . .	7	38	70	68	—2					2		1	2	2			3
	„ 100–110 „ . . .	6	53	65	68	3		1					3	1		1		1
	„ 110–120 „ . . .	3	14	75	73	—2					2			1				2
	„ 120–130 „ . . .	3	74	59	60	1						1	1				1	1
	„ 130–140 „ . . .	5	57	61	66	5				1			1	2	1			1
	„ 140–150 „ . . .	3	29	59	58	—1						1				1	1	2
	„ 150–160 „ . . .																	
	„ 160–170 „ . . .	1	56	46	38	—8											1	1
	„ 170–180 „ . . .	1	86	50	45	—5											1	1
132		132					1	14	9	16	22	14	19	22	8	3	4	30

In order to show the distribution of absences in relation to scholarship, and also in comparison with the absences of the Junior year, the table on page 74 has been prepared, analyzing the facts relating to the one hundred and thirty-two Seniors above referred to.

This table, like the similar tables prepared in previous years, shows a rough general correspondence between the number of absences and the position of students on the rank scale, with striking exceptions at each end of that scale, and a like correspondence between absences in the Junior year and those in the Senior year. Students whose absences are many in the Senior year are generally found to have been irregular in the previous year, and probably from the same cause. Except where this irregularity is the result of general ill-health, the privilege of voluntary attendance would seem merely to make more conspicuous a persistent indifference to college exercises, which the discipline of enforced attendance concealed without curing.

The most instructive comparison, however, for the purpose of testing the operation of the restriction under which the lower part of the last class enjoyed the privilege of voluntary attendance, is that which shows the distribution of absences in the successive strata of the class, arranged according to scholarship. In preparing the following table for this purpose, I have been able to use the record of one hundred and forty-four members of the Class of 1878, and have also incorporated similar returns for the Classes of 1875, 1876, and 1877: —

Each section contains: — 1875, 10 men. 1876, 10 ,, 1877, 13 ,, 1878, 10 ,,	Average number of absences.				Highest and lowest percentage.			
	1875.	1876.	1877.	1878.	1875.	1876.	1877.	1878.
1st section	24	25	29	34	.98–.92	.99–.91	.99–.91	.96–.93
2d ,, ...	42	36	33	32	.92–.89	.91–.88	.91–.88	.93–.88
3d ,, ...	38	39	42	22	.88–.85	.86–.81	.88–.83	.88–.85
4th ,, ...	50	46	53	35	.85–.82	.80–.78	.83–.80	.85–.82
5th ,, ...	45	50	50	54	.82–.79	.78–.76	.80–.77	.82–.79
6th ,, ...	54	59	69	59	.79–.77	.76–.74	.77–.74	.79–.77
7th ,, ...	64	44	91	50	.77–.74	.73–.71	.74–.70	.77–.74
8th ,, ...	70	59	56	63	.73–.71	.71–.69	.70–.68	.74–.71
9th ,, ...	69	77	76	66	.71–.68	.69–.66	.68–.65	.71–.69
10th ,, ...	89	75	82	85	.67–.65	.66–.64	.65–.62	.68–.67
11th ,, ...	76	92	98	80	.65–.63	.64–.61	.62–.59	.67–.64
12th ,, ...	85	58	83	70	.63–.61	.61–.57	.59–.56	.64–.63
13th ,, ...	88	89	99	81	.60–.55	.57–.53	.56–.53	.63–.60
14th ,, ...	124	108	111	105	.53–.48	.53–.30	.53–.39	.60–.38

A comparison of the horizontal sections thus made in four successive classes shows that, while there is no remarkable difference in scholarship in their uppermost sections, the middle and lower strata of the Class of 1878 gained a considerably higher percentage than the corresponding parts of the previous classes. This gain is noticeable in sections of the class which enjoyed the privilege of voluntary attendance without restriction, and is accompanied by a visible disposition to use the privilege more sparingly than previous classes had done. It is, however, most considerable in the last six sections of the class, which are chiefly made up of those students who were liable to forfeit the privilege for a time, in case of abuse. That this gain upon the scale of marks was the consequence of increased effort in the Senior year, is seen more clearly upon examination of the following statement of the numbers of students in each section of the class whose percentage rose or fell in the Senior year: —

In point of scholarship for the Junior year.	No. whose percentage fell off in Senior year.			No. whose percentage was stationary in Senior year.		No. whose percentage increased in Senior year.		
	No.	Average loss.	Average absences.	No.	Average absences.	No.	Average gain.	Average absences.
1st ten	5	10	79	1	65	4	4	34
2d „	2	8	40	1	20	7	8	20
3d „	6	5	57	1	9	3	5	24
4th „	1	2	28			9	6	29
5th „	3	5	88			7	7	41
6th „	2	5	121			8	8	70
7th „	5	4	60			5	6	58
8th „	2	2	73	1	41	7	8	80
9th „	1	2	118	1	20	8	11	60
10th „				1	40	9	7	76
11th „						10	12	60
12th „	1	4	146			9	12	61
12 remaining . . .	3	8	155			9	13	89
	31			6		95		

The number of students from the last five or six sections of the class who gained in percentage during the Senior year, and the average amount of their gains, is remarkable. It is always the case that the highest gains in the Senior year are made by the low scholars of the class, who can easily improve on their previous achievements, and are stimulated by some apprehension as to possible failure to obtain their degrees; but the improvement among students of this description during the last year exceeds that in either of the preceding classes with which I can make a comparison, and had an important part in raising the general average of the Class of 1878. It seems probable that the influence most efficient in producing this improvement among the least studious Seniors was the wholesome rigor with which the Faculty applied the rules at the graduation of the Class of 1877. The fact that nineteen members of that class lost their degrees by deficiencies in scholarship, could not fail to be a powerful stimulus for every Senior in 1878, who was conscious of previous negligence and still retained any hope of success. It also seems probable, however, that the action of this stimulus was strengthened by the restriction upon voluntary attendance. Students of infirm resolution may have been kept more steadily to their work, occasionally by the withdrawal of the privilege, but more frequently by the fear of its withdrawal. The scholarship thus secured was not high in degree, and the motives appealed to were not the most desirable; but in some respects the result is, no doubt, a gain.

It must be observed that this result, so far as it was due to the second of the causes named, was brought about by a sparing use of the power of suspending the privilege of voluntary attendance, which the Faculty have confided to the Dean. During the year, the privilege of sixteen students was suspended for periods not exceeding two months, and in thirty-eight cases students were cautioned as to the number of their absences. It was felt to be advisable, in the exercise of this power, to reduce the interference with the free action of the student to the lowest point consistent with the reasonable attainment of the proper objects of his residence in Cambridge. The administration of the rule did not, therefore, prevent a large amount of absenteeism in the lower part of the class; although, if the absences for which there were valid excuses should be deducted, the excess of absences taken at the will of the student would be seen to be much less than the figures contained in the tables above would indicate. This deduction, however, cannot be made with enough precision to be valuable, for the reason that near the close of the year students in the lower part of the class, for obvious reasons, ceased to feel any interest in presenting excuses for necessary absences.

It must be admitted, however, that the results secured by the restriction placed upon the privilege of voluntary attendance do not appear to be of great importance. A gain even of twelve per cent in the standing of students whose ambition is satisfied by attaining the minimum is, after all, of but moderate value. And even if the regularity of attendance of these students had been increased in a much more considerable degree than was done last year, this compulsory punctuality, maintained by no habit and having no foundation in character, would still appear to me to be of little real consequence. If seven years of previous training, in school and college, have not taught the student to prize his opportunities for instruction, or enabled him to rely upon himself for the proper regulation of his attendance, no great gain is to be expected from a process which enforces the appearance of punctuality during an eighth year. If the lesson of self-control is yet to be learned by those who have failed to learn it under the system of required attendance, it must be by a total change of method. To apply, even with some relaxation, the system of compulsion, is only an acknowledgment of failure, and the postponement of an indispensable part of the work of education to a later period than that in which it properly belongs.

To pursue this course of remark, however, would involve us once more in the general discussion as to the comparative advantages of freedom and constraint, into which it no longer seems worth while to enter. The results of four years' experience have supplied an ample basis for decision, the considerations on both sides have been well weighed by the Faculty, and the policy of the College, it may now be assumed, is settled, and settled in conformity with the general tendency of the University towards individual freedom and individual responsibility. The work which remains to be done is to adjust the necessary machinery of the College to the voluntary system, and to give that system the development which it needs, in order that its full benefits may be secured.

Thus far it is evident that the system of voluntary attendance has been established only in an imperfect form. Considered in its bearing upon the formation of character, it can only work out its full results when applied in such a way as to allow the student time to profit by his own experience, and to learn and use the lesson taught by his own mistakes or, it may be, by his own folly. This consideration, and others of similar character, led the Faculty, near the close of the last year, to determine that Juniors should hereafter enjoy the privilege, under the same conditions and subject to the same restrictions with Seniors. It is hardly doubtful that the upper part of the Junior Class is, with few exceptions, as well prepared for the enjoyment of the privilege as Seniors are; and in the exceptional cases the substantial advantage of being able to profit by experience is an important gain. Of the small number of good students known to have suffered injury in scholarship from an injudicious use of the privilege, most, there is reason to believe, recognized their mistake, and would have corrected it had another year been offered them. The same may be said of a considerable number of the medium or inferior scholars in every class. The opportunity now to be afforded, for applying in a second year the lessons derived, perhaps, from a bitter experience in the first, is an opportunity which comes none too soon, and which, rightly used, must continue to bear its fruits long after the student has finished his college course.

CHARLES F. DUNBAR, *Dean.*

TO THE PRESIDENT OF HARVARD UNIVERSITY: —

SIR, — I respectfully submit the following Report upon the Divinity School for the academic year 1877–78: —

The number of students was twenty-two. They were thus distributed: —

Senior Class	4
Middle ,,	6
Junior ,,	8
Special Students	4

Of these, two special students remained only a short time; and one Junior entered about the middle of the year. The work of the School for the year is presented in the accompanying tables.

Instructor.	Subjects and Methods of Study.	Number of Students.	No. of Exercises a Week.
	JUNIOR CLASS.		
Prof. Hedge.	Ecclesiastical History, from Death of Christ to the Edict of Toleration, A.D. 311. Subjects: The Propagation of Christianity in the Roman Empire, the Persecution of Christians, attacks in writing and replies of the Apologists, formation of Constitution of the Church, the Apostolic and Later Fathers, Doctrinal Developments, Heresies, and Schisms. Method: Lectures and Recitations. Text-books: Neander, Mosheim, Lamson, Schaff, and others.	8	1
Prof. Stearns.	Theology (fundamental). Method: Lectures, with references to authors, and Dissertations, one by each student. Ethics. Subjects: The Facts of Man's Moral Nature and Ethical Theories. Method: Lectures and Recitations.	8	2
Prof. Abbot.	New Testament. Subjects: Textual Criticism; Exegesis of Gospel of Matthew, from the first to the eighteenth chapter. Method: Lectures and Recitations.	11	2
Prof. Young.	The Hebrew Language. Text-books: Hahn's or Theile's Biblia Hebraica and Gesenius' Grammar. Method: After finishing the Grammar, the class read portions of the Pentateuch and Psalms, and had frequent exercises in forming sentences in Hebrew on the black-board.	8	3
Prof. Everett.	Philosophy and Logic (with reference to the study of Theology and the writing of Sermons). Method: Recitations in Everett's Science of Thought, and Lectures.	15	1
Prof. Baxter, and, later, Mr. Riddle.	Elocution.	8	1
	MIDDLE CLASS.		
Prof. Hedge.	Ecclesiastical History, from third to ninth century. Subjects: External History, Doctrinal Development, and Controversies, especially Christological Controversies, from Constantine to Justinian. Methods: Lectures, Recitations, and Dissertations by students.	6	2
Prof. Stearns.	Theology. Subjects: Revelation, Inspiration, Providence, and Prayer; origin of Christianity and ground of Credibility of the Gospels. Method: Lectures and Recitations. Ethics. Subjects: Ethics of Family and State. Method: Lectures, based on Rothe's Theological Ethics.	6	1

MIDDLE CLASS. — CONTINUED.

Prof. Abbot.	New Testament. Subjects: Gospel of Matthew, from chap. xviii. to chap. xxv. inclusive, with parallel passages from other Gospels; Gospel of John, its authorship, characteristics, and relation to the other Gospels, and Exegesis to chap. x.	8	2
Prof. Young.	Hebrew Literature. Subjects: Hebrew Poets and Prophets. Method: Recitations in selected passages, with exposition by teacher, special attention being given to obscure and controverted passages.	6	2
Prof. Everett.	Philosophy of Religion. Subjects: Certain Philosophical Systems considered in their relation to Theology, especially as a preparation for the study of the Ethnic Religions. The systems of Comte, Spencer, Darwin, Spinoza, and Schopenhauer were thus considered.	7	1
Prof. Everett.	Homiletics. Methods: Exercises by students, illustrating different methods of treating any theme. Lectures on the Composition of Sermons, on Rhetoric as applied to the Sermon, and on the Sermon considered in relation to the Purpose of Preaching; afterwards, sermons by students, — both exercises and sermons being criticised, first by the class and then by the teacher.	7	1
Prof. Baxter, and, later, Mr. Riddle.	Elocution. Each student twenty minutes a week.	7	

SENIOR CLASS.

Prof. Stearns.	Theology. Subjects: Anthropology, Christology, Soteriology, Eschatology. Methods: Lectures; and Readings assigned in Müller's Christian Doctrine of Sin, and other works. Dissertations by students. Ethics. Subject: The Relations between Ethical and Religious Development. Method: Lectures, based on Rothe.	5	1
Prof. Abbot.	New Testament. Subjects: Epistle to the Romans, from chap. xii. to chap. xvi. inclusive; after this the Gospel of John (in union with the Middle Class as above).	6	2
Prof. Young.	Lectures on the Old Testament, and on the Antiquities, Chronology, Calendar, and Customs of the Jews.	4	1
Prof. Young.	Reading of "Proben rabbinischer Weisheit" by Mendelssohn, Friedländer, and others, for the sake of subject and German. A voluntary exercise, open to all classes.	6	1

SENIOR CLASS.—CONTINUED.

Prof. Everett.	Ethnic Religions. Subjects: Vedic Religion, with Analysis of Upanishads, Buddhism, Parsism, and the Chinese Religion. Method: Lectures with references. Liturgics and Pastoral Care. Method: Fifteen Lectures, interrupting by so much the course on Ethnic Religions.	7	2
Prof. Everett.	Homiletics. Method: Sermons preached by students before the class, and criticised by students and teacher.	7	1
Dr. E. Young.	Ecclesiastical History. Subjects: External History of Church in the Middle Ages, Canon Law.		
Prof. Baxter, and, later, Mr. Riddle.	Elocution. Each student twenty-five minutes a week.	4	

GENERAL EXERCISES.

Preaching by some student every Friday evening, open to the public; the sermon carefully prepared and submitted to the teacher of Homiletics in advance.

Extempore speaking once in two weeks by three students, on a subject approved by the Faculty; each speaker being criticised by all members of the Faculty, in the presence of the school.

Conference meeting, conducted by students, the Faculty being present, once in two weeks (alternating with the above).

Evening prayers, conducted by students.

In regard to this table, it should be remarked, that the difference in numbers reported as attending exercises given to the same class, results from the fact that some exercises were voluntarily attended by members of other classes and by special students.

Five students, in addition to the work of the School, took College courses. The subjects thus studied were, Mineralogy, Chemistry, Botany, Philosophy, and the German Language.

The Divinity Boarding Club was successfully managed during the year. The price of board was about $3.50 per week. The membership numbered about forty early in the year; later, about thirty. Of these thirty, only five were members of the School, the rest belonging to other departments of the University. This falling off in numbers arose from no dissatisfaction, but from attractions elsewhere, — many preferring to take their meals at Memorial Hall. It will be seen that, under these circumstances, the Club is an advantage to the University in general, rather than to the Divinity School; and it may be doubted whether it is best to continue it longer in its present form.

Much attention has been given by the Faculty to the suggestion that many books of the library should be removed to Gore Hall, leaving in Divinity Hall only those needed for frequent reference. There are many reasons for this change. There would be little risk in allowing almost unrestricted use by students of the few books remaining in Divinity Hall. On the other hand, the books removed would have the much-needed protection of a fire-proof building; they would be properly catalogued; they would be accessible during more hours each day; and all the volumes on kindred topics in both libraries would be together. Practical difficulties have thus far stood in the way of this change, which may, yet, at some time be made.

The events of the year most important for the School are the final withdrawal of Dr. Hedge, who has been connected with it since 1857; and of Dr. Stearns, after twenty-one years of theological teaching, seven at Meadville and fourteen at Cambridge. These are losses to which the School can but slowly adjust itself.

Especially are these losses felt in view of the financial embarrassment of the School. This is a subject the details of which it is not my place to present. For the School, however, it is a matter of grave anxiety. Unless the friends of an unsectarian theological education come to its relief, the School will be lacking in some of the fundamental requisites of a thoroughly equipped institution of its class.

In other respects, the prospects of the School were never more encouraging. While the number of students has for the last few years remained about the same, the average quality of the students has continually improved. They bring with them, as a general thing, a much more thorough preliminary training than was common a few years ago; the spirit of the School is at once free and reverent; and there is no doubt that all the advantages which it may be enabled to offer will be intelligently appreciated and faithfully improved.

C. C. EVERETT, *Dean*.

DECEMBER, 1878.

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — I beg to submit the following Report upon the Law School for the academic year 1877–78: —

The table on page 85 gives the courses of study and instruction during the year, the names of the instructors, the text-books used, the number of exercises per week in each course, and the number of students who offered themselves for examination in each course at the end of the year.

There were sixteen moot-courts held during the year, — three by Professor Bradley, four by Professor Langdell, three by Professor Thayer, three by Professor Gray, and three by Professor Ames.

The whole number of students connected with the School, during the year, was one hundred and ninety-six. Of these, one hundred and seventy-two were in the School during the whole of the year, ten during two-thirds of the year, and fourteen during one-third of the year; making an average of one hundred and eighty-three and a fraction during the entire year, being one less than in the preceding year. Of the twenty-four who were in the School only a part of the year,

Studies.	Instructors.	Text-books.	Exercises per week.	Number of students examined.
		FIRST YEAR. **REQUIRED SUBJECTS.**		
Real Property.	Prof. Gray.	No text-book.	Two.	62
Contracts.	Prof. Langdell.	Langdell's Cases on Contracts.	Three.	61
Torts.	Prof. Ames.	Ames's Cases on Torts.	Three.	58
Criminal Law and Criminal Procedure.	Prof. Thayer.	Blackstone, Book 4; Greenleaf on Evidence, Part V.	One.	64
Civil Procedure at Common Law.	Prof. Ames.	Ames's Cases on Pleading.	One.	54
		SECOND YEAR. **REQUIRED SUBJECTS.**		
Evidence.	Prof. Thayer.	Best on Evidence; Stephens's Digest of the Law of Evidence.	Two.	69
Jurisdiction and Procedure in Equity.	Prof. Langdell & Prof. Ames.	Langdell's Cases in Equity Pleading; Forms of Procedure in Court of Chancery; Lectures without text-book.	Three.	66
		ELECTIVE SUBJECTS.		
Real Property.	Prof. Gray.	No text-book.	One.	32
Civil Procedure at Common Law.	Prof. Langdell.	Forms of Procedure in Court of K. B.; Lectures without text-book.	One.	1
Civil Procedure under the N. Y. Code.	Prof. Langdell.	Code of Civil Procedure.	One.	
Trusts, Mortgages, and other Titles in Equity.	Prof. Bradley.	No text-book.	Two.	65
Sales of Personal Property.	Prof. Thayer.	Langdell's Cases on Sales.	Two.	16
Corporations and Partnership.	Prof. Bradley.	No text-book.	Two.	38
Bills of Exchange and Promissory Notes.	Prof. Ames.	Ames's Cases on Bills and Notes.	Two.	35
Agency and Carriers.	Prof. Gray.	No text-book.	One.	38

twenty entered at the beginning of the year, and left during the year. The year did not turn out quite as well in respect to numbers as it promised to do at the date of my last annual report, a rather large number having afterwards left, and a very small number having entered to supply their places.

At the annual examinations, in June, 1877, sixty-three students passed their examinations in the studies of the first year, twenty-six others having tried and failed. At the examination for advanced standing, in September, 1877, ten of those who had failed in June presented themselves and passed. Thirteen new candidates also presented themselves at that examination, of whom eight passed and five were rejected. Therefore, the whole number of students who were entitled to become candidates for a degree at the annual examinations in June, 1878, was eighty-one. Of those eighty-one, sixty-six presented themselves for examination, of whom forty-seven passed and received degrees and nineteen were rejected. The whole number of candidates, therefore, who failed was forty, — twenty-one in the studies of the first year and nineteen in those of the second year. The ratio of candidates who received degrees to those who failed was, therefore, as forty-seven to forty. Comparing these figures with those of the preceding year, it appears that the number of *possible* candidates for a degree was nine more; the number of *actual* candidates, five more; and the number of *successful* candidates, seven less; while the number of those who failed in the studies of either the first or the second year was eighteen more. A partial explanation of this very bad record may perhaps be found in the fact that the class in question was the last one that was admitted without regard to educational qualifications.

At the annual examinations, in June last, there were sixty-six applicants for examination in the studies of the first year, of whom forty-six passed and twenty failed. Of the twenty who failed in June, three presented themselves and passed at the examination for advanced standing in September. The number of applicants, therefore, was twenty-three less than in 1877, and the number of failures in June six less. These figures, however, do injustice to the quality of the examinations in June last, as compared with those of June, 1877, as the former were, upon the whole, distinguished for their excellence. The figures are explained by the fact that the standard was much higher in

June last than in June, 1877. The smaller number of applicants in June last, as compared with June, 1877, is more than accounted for by the examination for admission; for of the eighty-nine applicants in June, 1877, there were forty-six who were not graduates of colleges, while of the sixty-six applicants in June last, there were only twenty-one who were not graduates of colleges. Nine of these twenty-one, also, were special students, and so not candidates for a degree.

For a considerable period preceding the date of my last annual report, much inconvenience had been experienced from the crowded state of the library. This evil had increased to such a degree that members of the School not unfrequently were unable to find a place to sit. During the cold weather, also, it was found impossible to obtain sufficient ventilation without making the room too cold for either comfort or safety. How to remedy this evil without a new building had long been a problem, for which no satisfactory solution was offered. Finally, however, a plan was adopted for procuring an additional amount of space for the library by taking in two adjoining rooms. This plan was carried into execution during the last Christmas recess, and it has proved to be an entire success. The three rooms taken together provide sufficient space for a considerably larger number of students than we have ever had; and as each of the new rooms has a fire-place, while the library proper has none, the change improved the ventilation even more than it increased the amount of space.

At the close of the academic year now under review, the Faculty established two parallel courses of study, differing from each other in important particulars; namely, an ordinary course leading to the degree of LL.B., and an honor course leading to the degree of LL.B. *cum laude*. The leading distinction between the two courses is, that in the honor course all subjects having in them a large element of equity are required, while in the ordinary course those subjects, as well as all others after the first year, are elective. A leading object of the measure was to enable a student to obtain the ordinary degree without studying equity (provided there were a sufficient number of other subjects taught to make up the required number of hours), and at the same time to encourage the study of equity by specially honoring those who pursued it successfully to the full extent that it is taught. The honor degree, however, represents a higher degree of excellence than the ordinary degree, as well as a different course of study, it being made a condition of receiving the honor degree that the candidate pass the examinations in the studies of the second and third years without any condition, and that he obtain a general average of not less than seventy-five per cent of the maximum mark in each of those years.

The efforts hitherto made to teach the subject of procedure (except those parts of it which belong to pleading and evidence) have not been attended with satisfactory results. Two elective courses of one hour a week each were given upon it during the year under review, but they were each attended by only a very small number of students, some of whom were resident Bachelors of Laws who were studying for the degree of A.M.; and, with a single exception, the latter alone presented themselves for examination. Both of those courses have accordingly been dropped for the present, and it seems not desirable to resume the subject hereafter, unless it can be done under better auspices. It is not one of those subjects which should be taught for the benefit of a very small number of students, even assuming it to be the policy of the School to teach such subjects. Every argument which can be adduced in favor of teaching it at all is an argument in favor of teaching it generally, and making it a feature of the School.

C. C. LANGDELL,
Dean of the Law Faculty.

DECEMBER, 1878.

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — As Dean of the Medical Faculty, I submit the following Report upon the Medical School for the academic year 1877–78.

The table on the following pages shows the amount and character of the instruction given.

The whole number of students in attendance during the year was two hundred and twenty-seven; during the first term, two hundred and nineteen; during the second, two hundred and eight. Seventy-two candidates for the degree of Doctor of Medicine offered themselves for examination. Of these, six withdrew their names, and nineteen were rejected. Forty-seven passed, and received their degrees.

The scholarships were awarded to George Frederick Keene and Lewis Henry Plimpton, of the Third Class, and James Edwin Cleaves and Walter Prentice Bowers, of the Second Class.

The results of the admission examinations were as follows: In June, twenty-two candidates applied, of whom eighteen were admitted unconditionally, and four were rejected. In September, forty-one candidates applied, of whom sixteen were admitted unconditionally, twenty were admitted conditionally, and five were rejected. One of those rejected in June was admitted without condition in September. The failures in September were as follows: In Physics, eighteen; Latin, ten; German, two.

The table on page 92 gives the statistics of rejection at the examinations held in June on the studies of the first, second, and third years, from 1875 to 1878 inclusive.

Valuable gifts of plates and diagrams have been received from the widow of the late Professor Charles Edward Buckingham, and of photographs of specimens in the Army Medical Museum, from Surgeon-General Joseph K. Barnes.

Some time since, an invitation was received to join the American Association of Medical Colleges, established to secure a greater uniformity in medical education; but, as the standard proposed was lower than that already adopted by the School, the invitation was declined.

C. ELLIS, *Dean*.

DEC. 5, 1878.

Instructors.	Studies.	Text-books and Collateral Reading.	Exercises per week.	
			1st half-year.	2d half-year.
		FIRST CLASS.		
Prof. Holmes	Anatomy	Gray. — Wilson. — Leidy. — Quain (edition of 1876). — Holden's Osteology. — Frey's Histology. — Stricker's Manual of Histology. — Tyson's Cell Doctrine	4 during first eight weeks 5 during last eleven weeks	4 till May.
Dr. Porter	Practical Anatomy	Hodges's Practical Dissections	5 after Jan. 1	5 till May.
Dr. Beach	Practical Anatomy	Hodges's Practical Dissections	5 after Jan. 1	5 till May.
Dr. Dwight	Histology	Schäfer's Histology. — Rutherford's Histology. — Frey's Microscopic Technology. — Frey's Histology	2	2 till April.
Dr. Dwight	Embryology	Foster and Balfour's Elements of Embryology		2 in May.
Prof. Bowditch	Physiology	Dalton. — Carpenter. — Kirkes. — Huxley. — Pavy on Food and Dietetics. — Sanderson's Hand-book. — Flint. — Hermann, Grundriss der Physiologie. — Fick, Compendium der Physiologie. — Fick, Medicinische Physik	4	4
Dr. Hills	General Chemistry	Thorpe's Manual of Inorganic Chemistry. — Clowe's Elementary Treatise on Practical and Qualitative Inorganic Analysis. — Miller's Elements of Chemistry	3 during first ten weeks 2 during last nine weeks	2
		SECOND CLASS.		
Prof. Cheever	Regional Anatomy	Braune's Atlas of Topographical Anatomy, translated by Bellamy		2 for three weeks.
Dr. Porter	Practical Anatomy	Hodges's Practical Dissections	5 till Jan.	
Dr. Beach	Practical Anatomy	Hodges's Practical Dissections	5 till Jan.	
Prof. Wood	Medical Chemistry	Neubauer and Vogel, Analysis of Urine. — Tyson, Practical Examination of Urine. — Reese's Manual of Toxicology. — Ralfe's Outlines of Physiological Chemistry. — Taylor on Poisons. — Gorup-Besanez, Physiologische Chemie. — Tardieu, Étude médico-légale et clinique sur l'Empoisonnement	2	2
Prof. Markoe	Materia Medica	Parrish's Pharmacy. — United States Pharmacopœia. — United States Dispensatory	1	1
Prof. Fitz	Pathological Anatomy	Wagner's Manual of General Pathology. — Orth's Compend of Diagnosis in Pathological Anatomy. — Virchow's Cellular Pathology. — Jones and Sieveking's Pathological Anatomy (Payne's edition). — Wilks's Pathological Anatomy (Moxon's edition)	4	4
Prof. Fitz	Pathological Histology	Rindfleisch's Pathological Histology	2	2 till April.
Prof. Ellis	Clinical Medicine		4	3
Dr. Knight	Auscultation, Percussion, and Laryngoscopy		6	6
Dr. Warren	Surgery	Billroth's Surgical Pathology. — Bryant's Practice of Surgery	1	1
Dr Warren	Surgical Histology			2 after April 1.
Prof. Bigelow	Clinical Surgery		1	
Prof. Cheever	Clinical Surgery		1 after Dec. 1	1 till April.
Dr. Porter	Clinical Surgery			1
Dr. Warren	Bandaging and Apparatus	Heath's Minor Surgery and Bandaging		4 during two weeks.

THIRD CLASS.

Prof. Edes	Therapeutics	H. C. Wood's Therapeutics. — Bartholow's Materia Medica and Therapeutics. — Stillé's Therapeutics and Materia Medica. — Ringor's Therapeutics	3	3
Prof. Reynolds	Obstetrics	Leishman's System of Midwifery. — Schroeder's Manual of Midwifery. — Cazeaux's Midwifery	2	1
Dr. Richardson	Obstetrics		1	1
Dr. Richardson	Operative Obstetrics		6 during one week	6 during two weeks.
Prof. Minot	Theory and Practice	Flint's Practice of Medicine. — Niemeyer's Practice of Medicine. — Jaccoud's Pathologie interne. — Aitken's Science and Practice of Medicine. Reynolds's System of Medicine	5	5
Prof. Ellis	Clinical Medicine		4	3
Prof. Bigelow	Surgery	Billroth's Surgical Pathology. — Bryant's Practice of Surgery. — Holmes's System of Surgery	1 after Nov. 1	
Prof. Cheever	Surgery	Same as above, also Cooper's Surgical Dictionary (edition of 1872)	2 till Dec. 1	
Prof. Bigelow	Clinical Surgery		1	
Prof. Cheever	Clinical Surgery		2 after Dec. 1	2 till April.
Prof. Cheever	Operative Surgery	Holden's Landmarks, Medical and Surgical. — Guérin, Éléments de Chirurgie Opératoire		6 during two weeks.
Prof Williams	Ophthalmology	Williams on Diseases of the Eye. — Wells on Diseases of the Eye. — Stellwag on Diseases of the Eye. — Schweigger, Der Speciellen Augenheilkunde. — Donders on Refraction and Accommodation. — Allbutt's Use of the Ophthalmoscope in Diseases of the Nervous System	2 till Jan. 1	1 till April 1.
Prof. White	Dermatology	Hebra and Kaposi, Hautkrankheiten. — Neumann, Lehrbuch der Hautkrankheiten. — Duhring's Diseases of the Skin. — Fox's Skin Diseases. — Anderson on Skin Diseases. — Hardy, Maladies de la Peau	2	2
Dr. Greenough	Syphilis	Bumstead on Venereal Diseases. — Van Buren and Keyes on Diseases of the Genito-Urinary Organs and Syphilis	1	
Dr. Wigglesworth	Syphilis	Same as above, and Duhring on Diseases of the Skin. — Zeissl, Lehrbuch der Syphilis. — Orth's Diagnosis in Pathological Anatomy		1 after April 1.
Dr. Green	Otology	Burnett on the Ear. — Dalby on the Ear. — Roosa on the Ear. — Schwartze's Pathological Anatomy of the Ear. — Politzer's Lehrbuch der Ohrenheilkunde	1	1
Dr. Baker	Diseases of Women	Thomas on Diseases of Women (4th edition). — Cyclopædia of the Practice of Medicine (Vol. X. American translation). — Barnes's Clinical History of the Medical and Surgical Diseases of Women. — Scanzoni's Diseases of Females. — Klob's Pathological Anatomy of the Female Sexual Organs	2	2
Dr. C. P. Putnam	Diseases of Children	West. — Meigs and Pepper. — Smith	1	1
Dr. Rotch	Diseases of Children	Vogel — Gerhardt		1 after April 1.
Dr. Webber	Diseases of Nervous System	Ziemssen's Cyclopædia. — Poore's Text-book of Electricity in Medicine and Surgery	1	
Dr. J. J. Putnam	Diseases of Nervous System	Ziemssen's Cyclopædia. — Reynolds's System of Medicine	1	1
Dr. Draper	Hygiene	Parkes's Practical Hygiene. — Wilson's Handbook of Hygiene. — De Chaumont's Lectures on State Medicine. — Mass. State Board of Health Reports		1 in April and May.
Dr. Folsom	Hygiene		1 after Jan. 1	

JUNE EXAMINATIONS.

STATISTICS OF REJECTION.

		FIRST YEAR.						SECOND YEAR.						THIRD YEAR.											
		Anatomy.		Physiology.		General Chemistry.		Medical Chemistry.		Materia Medica.		Path. Anatomy.		Theory and Practice.		Clinical Medicine.		Surgery.		Clinical Surgery.		Therapeutics.		Obstetrics.	
			Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.
1875	Passed	39		38		23		43		39		37		21		19		28				17		18	
	Rejected	20	33	24	38	19	45	4	8	5	11	5	11	2	8	2	9	1	3			8	32	9	33
	Total	59		62		42		47		44		42		23		21		29				25		27	
1876	Passed	44		41		34		54		53		52		47		40		41		33		46		36	
	Rejected	24	35	24	36	16	32	3	5	5	8	8	13	1	2	8	16	4	8	4	8	15	24	16	30
	Total	68		65		50		57		58		60		48		48		45		37		61		52	
1877	Passed	63		46		42		45		44		47		52		50		57		46		49		51	
	Rejected	14	19	29	38	26	38	9	16	12	21	12	25	5	8	8	13		0	5	9	10	16	6	10
	Total	71		75		68		54		56		59		57		58		57		51		59		57	
1878	Passed	56		52		49		54		52		56		53		53		51		54		48		36	
	Rejected	17	23	25	32	14	22	8	12	13	20	11	16	3	5	7	11		0		0	4	7	21	36
	Total	73		77		63		62		65		67		56		60		51		54		52		57	

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — I have the honor of submitting the following Report upon the Dental School for the year 1877–78: —

The number of students for the year was sixteen, of whom five were newly entered and of the first year's class, six were of the second year, and three of the third year. Two students failed to pass the examinations of the previous first year, and were therefore, under the rules, obliged to remain in that class, making the number of students in the first-year class seven, and the whole number, as above, sixteen.

The same causes, referred to in previous Reports, continue to keep down the number of students; but there seems to be an increasing interest in the School, evinced by increased inquiry in regard to it from every quarter.

The instruction has not greatly differed from that of former years. That given by the Medical Professors in Anatomy, Physiology, and Chemistry, attended in the rooms of the Medical School by our students, in common with the medical students, is the same in the first year's course in both schools. The Professor of Surgery gave two lectures on Oral Surgery and one on Anæsthetics and their administration, to the second-year students. This class also attended twelve lectures on Surgical Pathology, given by the Professor of Clinical Surgery, also in connection with the Medical Class; also five lectures on Gestation and diseases of women as affecting the condition of the mouth and teeth, by the Assistant Professor of Operative Dentistry.

In the Out Patients' Department of the Massachusetts General Hospital, which is also the Infirmary for Operative Dentistry of our School, the usual instruction has been given. The number of students has been entirely too small to fill all demands for operations, but an idea of the amount of work done may be obtained from the following statistics, viz.: —

Whole number of patients for the year	5,011
„ „ new patients for the year	3,960
Number of patients having one or more teeth extracted	2,850
„ teeth extracted	4,538
„ patients who have had teeth filled	908
„ teeth filled	1,375
Unclassified operations	265
Whole number of operations of every kind	6,178

Instruction in this department has been given during the school year on five afternoons of every week, from two till five o'clock, or later, either the Professor or one of his aids being present, together with the Demonstrator, on each afternoon. The instruction is given by lectures and clinics and by personal assistance to the pupil.

In Mechanical Dentistry, the Professor has given two hours each week to lectures and clinical instruction, giving thirty-five lectures of an hour's duration during the year. The Demonstrator or his Assistant has also been present in the laboratory for five days of each week, from nine till twelve, for clinical teaching, and personal instruction and assistance. The operations in this department demanding days instead of hours, their number is necessarily less than in the Operative Infirmary. Yet patients have presented themselves in sufficient numbers and variety to give all full opportunity for instruction and employment.

The Demonstrator in charge of both departments was taken sick early in the term; and his continued illness incapacitating him from attention to his duties throughout the remainder of the year, his place in the operative department was filled by Dr. Henry F. Dunkel, a late graduate of the School, who has performed the duties in a manner highly creditable to himself and to the entire satisfaction of the Faculty.

Dr. Grant, the Demonstrator in the Mechanical Department, has performed the whole duties pertaining to the office, also entirely to the satisfaction of the Faculty.

The Instructors in Dental Pathology and in Dental Therapeutics have each given one hour a week to lectures and recitations. The former has also given much instruction in the microscopical structure and development of teeth, together with the preparation of sections and the use of the microscope.

A large collection of specimens of *materia medica* has been presented to the School for the illustration of his lectures by the Instructor in Dental Therapeutics.

I regret to add that Dr. William H. Rollins, our able and faithful Instructor in Dental Pathology, was compelled by the state of his health to resign his position at the close of the year.

THOS. H. CHANDLER, *Dean*.

DEC. 7, 1878.

To the President of the University: —

Sir, — I have the honor to submit the following Report upon the Lawrence Scientific School for the academic year 1877–78.

The number of students registered during the year was twenty-eight. They were classified as follows: seven in Engineering, three in Chemistry, six in Natural History, one in Mathematics, eleven in special courses.

Mr. H. N. Wheeler gave instruction in Spherical Trigonometry and Analytical Geometry to students of the first year in Engineering. They attended his exercises, one hour daily, five days in the week. Trigonometry was taught mainly by notes, with practical applications to solid geometry and astronomy. In Analytical Geometry, Howison's text-book was used.

Mr. F. W. Dean gave instruction in Mechanical Drawing and Surveying. The course in Mechanical Drawing included problems in Descriptive Geometry, Plotting Surveys, Isometric Projections, and Tinting, and occupied six hours a week. In Surveying, Gillespie's Treatise was used as a text-book and Henck's field-book. The exercises consisted of recitations and field-practice with the compass, transit, and level.

The course called Natural History, 1, was made up of three parts. The first half of the year was devoted to a course in Lithology, under Mr. Wadsworth. The second half was devoted to Physical Geography and Geology, under the direction of Professor Whitney and Professor Shaler.

In Physics, the exercises consisted of recitations and laboratory work, under direction of Assistant Professor Trowbridge. These exercises were attended by students in Mathematics, Natural History, and Engineering. Mr. Willson also gave a course in Physics, covering the first two volumes of Deschanel's Natural Philosophy.

In French and German, the scientific students are classed with undergraduates. In French, the instruction was given by Assistant Professor Jacquinot; in German, by Messrs. Faulhaber and Hodges.

One student pursued a course in Modern Analytical Geometry under Assistant Professor Byerly, and in Quaternions under Professor B. Peirce.

Professor Whitney gave a course of lectures in Economic Geology.

Professor Shaler gave instruction in Geology and Palæontology. The exercises consisted of recitations and lectures three times a week, with laboratory work and excursions.

Mr. Faxon and Dr. Mark gave courses of lectures in Zoölogy, with laboratory exercises.

Dr. James gave two courses of lectures, one in Anatomy and Physiology, and one in Psychology.

Professor Goodale gave three courses in Botany, — one in Elementary Botany, one in Advanced Botany, and one in Medical Botany.

Students in all the departments attend Professor Cooke's lectures in Chemistry once a week, and Assistant Professor Jackson's course. The latter consists of two lectures, one recitation, and three hours of laboratory practice each week. Those who are specially studying Chemistry follow varied courses under Professor Cooke, Assistant Professor Hill, and Messrs. Hodges and Mabery.

In consequence of Mr. Moore's absence, the instruction in Free-hand Drawing was suspended.

Professor Eustis gave instruction five hours a week to the third year's class in Engineering, in Theoretical and Applied Mechanics; also five hours a week to the second year's class, in Differential and Integral Calculus.

The first year's class in Engineering had three exercises a week, under Professor Eustis, in Descriptive Geometry, and its applications to shades, shadows, perspective, and stereotomy. This course was attended by one Senior and one Sophomore.

Five persons received the degree of S. B., — two in Chemistry and three in Natural History.

H. L. EUSTIS, *Dean.*

To the President of the University: —

Sir, — I respectfully submit the following Report upon the Bussey Institution for the year 1877–78: —

The number of students registered during the year was eight. Three of them were students in regular standing, who attended all the courses of instruction given at Jamaica Plain. Four were special students in horticulture, two of whom attended the botanical lectures, in addition to the instruction more directly relating to theoretical and practical horticulture. One was a student of veterinary medicine, who took a part of Professor Slade's course in Applied Zoölogy as a preliminary to studies which he intended to pursue at some veterinary college.

The regular course of instruction comprised lectures and practical exercises in Horticulture, by Mr. Watson; the Theory of Farming, by Mr. Motley; Applied Zoölogy (including the dissection of domestic animals), by Professor Slade; Phænogamic Botany, by Professor Goodale; Cryptogamic Botany, by Professor Farlow; and Agricultural Chemistry, by Professor Storer.

Exercises in all these subjects were continued throughout the academic year, from the beginning of October, 1877, to the end of June, 1878, with the exception that each of the botanical courses lasted but half the year; that is to say, Phænogamic Botany was taught by Professor Goodale from October to February, and Cryptogamic Botany by Professor Farlow from February to June.

The most important event of the year was the resuscitation of horticultural instruction, which had been in abeyance since the departure of Professor Parkman in 1872. Mr. B. M. Watson, Jr., entered upon his duties as instructor in Horticulture in September, 1877, and speedily illustrated, by the marked success of his teachings, the great importance of this department of the school.

In addition to the regular school exercises, a course of ten public lectures on the Principles and Practice of Horticulture was given in the large hall of the Bussey Institution on Wednesday and Saturday afternoons, during the months of April, May, and June, 1878, by Messrs. Watson, Goodale, and Farlow. Thirty-four tickets for this special course of lectures were sold, at three dollars each.

Valuable gifts of books have been received from Messrs. William Everett, Francis H. Appleton, and A. W. Cheever. Mr. Everett's gift was specially acceptable, in that it comprised a set of the "Journal of the Royal Agricultural Society of England," from 1840 to 1864, which precisely completed the series of this journal already in the library of the school. Several other gifts of single volumes were received from individuals and from societies with which the publications of the Institution are exchanged.

One part (No. 2 of Vol. II.) of the "Bulletin of the Bussey Institution" was published in February, 1878. It contained six papers, by Professors Parkman, Farlow, and Storer. It is to be regretted that a lack of funds available for scientific research has prevented the continuance of this publication, which has been everywhere received with favor by the agricultural public, and has had the effect of bringing several excellent students to the school.

F. H. STORER, *Dean.*

JAMAICA PLAIN, Dec. 4, 1878.

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — I have the honor to submit the following Report upon the condition and progress of the Botanic Garden and Arnold Arboretum during the year ending August 31, 1878.

BOTANIC GARDEN.

The work of re-arranging the hardy plants in the Garden has been continued during the year.

The natural orders, from *Cistaceæ* to *Geraniaceæ* inclusive, and the *Umbelliferæ*, *Araliaceæ*, and *Cornaceæ*, have been planted, thus completing the arrangement of the *Polypetalæ*. The arrangement of the *Gamopetalæ* has been completed by planting the *Caprifoliaceæ*, *Rubiaceæ*, *Valerianaceæ*, *Dipsaceæ*, and the orders after *Oleaceæ*.

The Polypetalous and Gamopetalous orders, especially of the North American Flora, are now fairly well represented, so far as the very limited space in the Garden permits. Trees, however, with few exceptions, have been excluded from the new arrangement; and even those for which space has been found have been planted with the idea of testing their hardiness, rather than in the expectation that they will ever be able to reach an interesting development. The old rockery of the Garden has been entirely rebuilt and replanted during the year. A small piece of new rockery, covering three hundred square feet of ground, and connecting the old and new rockeries, has been built for the cultivation of hardy North American Orchids, in which the Garden is just now especially rich.

The artificial bog has been enlarged, and entirely remodelled and replanted, during the year, with satisfactory results. It is, however, still far too small for even a good selection of the plants requiring constant moisture throughout the year, which could be cultivated in this climate to advantage.

The noble specimen of *Livistona Chinensis*, Mart., which flowered and ripened its fruit in the Palm House during the preceding year, having hopelessly outgrown its quarters, has been destroyed; and the Garden has lost its finest representative of exotic vegetation. A vigorous young specimen of *Pritchardii Gaudichaudii*, Herm. Wendl., has been planted out to replace it.

The following interesting plants have flowered in the Garden for the first time during the year. With a few exceptions, they have not flowered in cultivation before: —

Acidanthera bicolor, Hochst.
Anterrhinum speciosum, Gray.
Aster Bigelowii, Gray.
Aster Curtissii, Torr. & Gray.
Aster salsuginosus, Richardson.
Berberis Fendleri, Gray.
Eremurus robustus, Regel.
Eucridium Breweri, Gray.
Fedia Nuttallii, Torr. & Gray.
Gutierrezia Euthamiæ, Torr. & Gray.
Gymnolomia Porteri, Gray.
Hesperalœ yuccæfolia, Engelm.
Iris Hartwegi, Baker.
Lobelia Feayana, Gray.
Palmerella debilis, Gray.
Pancratium, n. sp. Florida.
Physaria Newberryi, Gray.
Polymonium carneum, Gray.
Senecio Elliottii, Torr. & Gray.
Senecio Millefolium, Torr. & Gray.
Spiræa cæspitosa, Nutt.
Townsendia sericea, Hook.
Xanthosoma sagittifolium, Schott.
Zygadenus Fremontii, Torr.

A row of maple-trees, presented for the purpose by Mr. James H. Bowditch, of Pomfret, Conn., has been planted in Linnæan Street, along the southern boundary of the Garden.

The number of visitors to the Garden is rapidly increasing, and probably twice as many persons have entered its gates during the past year as during any previous twelve months since its establishment.

ARBORETUM.

The difficulties of making a proper plan for laying out the Arboretum have always appeared very great to me. The site, while offering exceptional beauties, perhaps, for a public park, offers exceptional topographical difficulties for the object to which it is to be devoted; namely, a museum, in which as many living specimens as possible are to find their appropriate positions. In such a museum, every thing should be subservient to the collections, and the ease with which these can be reached and studied; and none of those considerations of mere landscape effect, which properly govern the laying out of ordinary public parks, should be allowed to interfere with these essential requirements of a scientific garden, however desirable such effects undoubtedly are.

The possibility of making a plan which should place every plant in the best position attainable for it, preserving at the same time for the whole collection, as nearly as practicable, the fixed sequence of arrangement, which alone makes large collections valuable for comparative study and possible to manage, was, then, the first thing to be considered. In connection with this, but subservient to it, it was necessary to devise a system of roads and walks which should make easily accessible to a large number of visitors every plant in the collection, and which, without interfering with the scientific necessities of arrangement, should open up and develop, as far as possible, the remarkable natural beauties of the ground.

In discussing these questions with Mr. Olmsted, during a visit which he paid to the Arboretum, he volunteered to make a plan embracing his ideas of the best method of attaining these ends, which he agreed were essential. The benefit to the Arboretum of Mr. Olmsted's generous offer can hardly be overestimated. The foremost of landscape architects, he brings to this undertaking the largest experience and the wisest judgment; and I shall be satisfied that the plan he finally offers will be the very best attainable under the circumstances.

That this offer might be accepted, the sum of two thousand dollars was necessary, with which to pay for a survey and topographical map of the ground, and for office and other incidental expenses. It was at once subscribed by the following gentlemen: —

Ignatius Sargent	$300.00	T. Jefferson Coolidge	$100.00
H. H. Hunnewell	300.00	George B. Emerson	100.00
John L. Gardner	200.00	W. R. Robeson	100.00
John C Phillips	200.00	Amos A. Lawrence	100.00
Kidder, Peabody, & Co.	200.00	H. W. Sargent	100.00
William Amory	100.00	The Director	200.00

The survey and an accurate topographical map of the Arboretum have been made by Messrs. Radford & Vaux, of New York, under the direction of Mr. Olmsted; but the plan, to which, however, a great deal of preliminary study has been given, cannot be definitely determined on until certain general questions relating to the future of the Arboretum are decided by the President and Fellows; and the planting, which I had expected to see commenced during the coming year, must now be put off for at least a year longer.

The benefits which follow the rigid exclusion of all browsing animals from woodlands are now apparent in the Arboretum, over large tracts of which numbers of young forest trees have sprung up spontaneously during the last few years. These have been carefully thinned during the year, the most valuable only being preserved. The older trees have also been thinned again, wherever their vigor of growth, resulting from earlier thinnings, has rendered it necessary; and the woodlands are now in as satisfactory condition as could be hoped for.

Letters are constantly addressed to me, asking for information on various subjects connected with forestry. These questions very generally point to the importance of solving these two problems: 1. How shall the worn-out and exposed lands of the Atlantic seaboard be covered with trees again in the cheapest and quickest manner; 2 (and this is a far more important and difficult question to settle). How shall the treeless Western States, which are watered by the Missouri and its tributaries, be best rendered more habitable and productive, through covering portions of them with forest growth, and especially what trees shall be selected for this purpose.

A solution of the first of these problems can well be reached by individual experiment and effort. The second will only be satisfactorily solved, under existing circumstances, by the railroad corporations, who alone of Western land-owners are in a position to make experiments extensive enough to be conclusive, and who, as the largest owners of the soil, should be the most interested in demonstrating the capabilities of their lands to produce valuable forest products, of which they themselves must always be the largest consumers. To solve as far as possible these two problems, experiments have been undertaken during the past year, in accordance with suggestions I have offered, in the East, by individual land-owners interested in the subject, principally in Rhode Island; in the West, and on a large scale, by one of the railroad corporations of Kansas. It is proposed to publish the results of all such experiments as soon as they have extended over a sufficient period of time to be in any way conclusive or instructive.

I have been able to secure, during the year, legislation in Massachusetts and Rhode Island, which, by exempting from taxation certain lands planted with forest trees, will, it is hoped, materially increase the numbers annually planted in these States.

By the direct inspiration of the Arboretum, nearly four hundred thousand (393,245) trees have been planted during the year in various parts of the country; and, through its correspondents in the Rocky Mountains, it has at last been possible to procure for cultivators in this country and Europe large quantities of the seeds of some of the peculiar trees of that region, which, although known to be extremely well suited to the climate of New England and the northern portions of Europe, have heretofore been practically unattainable by American or European planters.

If the Arboretum is already beginning to assume some public importance and to exert a certain influence, it is owing, in a large measure, to the cordial assistance I have always received at the hands of the Trustees of the Massachusetts Society for Promoting Agriculture. Not only have these gentlemen granted me, year after year, large appropriations in money for the use of the Botanic Garden and Arboretum, — appropriations which have alone made possible the current operations of those establishments, — but they have forwarded also, with their influence and by generous appropriations, any plans which have promised to aid or supplement the work of the Arboretum.

INTERCHANGE OF PLANTS AND SEEDS.

The interchange of plants and seeds with other botanical and horticultural establishments has been continued. There have been 18,919 plants and 1,267 packets of seeds distributed during the year, as follows, as against 32,203 plants and 1,125 packets of seeds distributed during the previous year: To all parts of the United States, 15,663 plants and 337 packets of seeds; to Great Britain, 2,226 plants and 471 packets of seeds; to the Continent of Europe, 730 plants and 455 packets of seeds; to Australia, 4 packets of seeds; and to the Sandwich Islands, 100 plants. Of the above, 5,233 seedling trees and shrubs have been distributed from the Arboretum to different portions of the United States, 1,530 to Great Britain, and 532 to the Continent of Europe. There have been 7,758 plants raised in the propagating houses of the Arboretum for the Botanic Garden, besides a very large number supplied to the horticultural department of the Bussey Institution.

There have been contributed to the Garden and Arboretum, during the year, 5,446 plants and 1,786 packets of seeds from 108 donors, as against 6,849 plants and 2,988 packets of seeds received during the previous year from 95 donors. Of these, 4,109 plants and 440 packets of seeds have been received from the United States; 380 plants and 373 packets of seeds from Great Britain; 710 plants and 919 packets of seeds from the Continent of Europe; 8 plants and 28 packets of seeds from Australia; 15 packets of seeds from New Zealand; 6 packets of seeds from China; 160 plants from the Sandwich Islands; and 79 plants and 5 packets of seeds from Mexico.

Among American contributions, the most important have been a large and excellent collection of seeds of Rocky Mountain plants from Mr. T. S. Brandigee; a collection of seeds of Colorado and California plants, made by Prof. Asa Gray and Sir J. D. Hooker, during their Western journey; plants and seeds of Northern Mexico, from Dr. C. C. Parry; plants and seeds of Missouri, from Dr. George Englemann, of St. Louis; several collections of plants and seeds, from Prof. Beal, of the Michigan Agricultural College; rare Northern plants, from Mr. C. G. Pringle, of Charlotte, Vt.; seeds of *Cercidophyllum*, *Sciadopitys*, and of other plants of Japan, from President Clark, of the Massachusetts Agricultural College; Florida plants, from Mrs. Mary Treat, Dr. A. P. Garber, and Mr. A. H. Curtiss. Contributions have been received from the following American nurserymen: Woolson & Co., Passaic, N. J.; Ellwanger & Barry, Rochester, N. Y.;

P. J. Berckmanns, Augusta, Ga.; George Such, South Amboy, N. J.; L. Menand, Albany, N. Y.; Thomas Meehan, Philadelphia; Miller & Seaver, San Francisco; and James H. Bowditch, Pomfret, Conn.

Valuable foreign contributions have been received from the Royal Botanic Gardens, Kew; from the Museum d'Histoire Naturelle, Paris, a collection of trees and many seeds; from the Imperial Botanic Garden, St. Petersburg, many new plants and seeds; from the Royal Botanic Gardens of Palermo and Edinburgh, seeds; from the Rev. H. Ewbank, England, herbaceous plants; from Mr. H. J. Elwes, England, bulbs and seeds; and from the Acclimatization Society of Queensland, valuable palm and other seeds. The Garden has been especially enriched by frequent and valuable gifts of new plants and seeds from Max Leichtlin, of Baden-Baden; and by a collection of rare ligneous plants from the *Arboretum Segrezianum*, sent by its proprietor, M. Alphonse Lavallée, of Paris. Contributions have also been received from the following European nurserymen: William Thompson, Ipswich; Veitch & Son, London; Huber & Co., Hyères; and Haage & Schmidt, Erfurt.

C. S. SARGENT, *Director.*

To the President of the University: —

Sir, — I make what is properly my first report, — a brief memorandum furnished last year having been preliminary in character. A year's service has established my knowledge of the Library and of its sphere of usefulness. In making what I held to be improvements in the administration of the Library, I have not acted without due deliberation; and the changes made have been kindly accepted by the staff, and by those whose servants we are. I have at all times aimed to enlarge the Library's importance in the eyes of our academic community. I wish to see it become, not merely in complimentary phrase, the centre of the University system, but, in actual working, indispensable and attractive to all. The new methods of teaching in the University must necessarily render the Library more and more important among the various agencies of instruction. I think that in the higher education the methods which science so successfully adopts must in the future be more closely applied to instruction in arts. The controlling influence of text-books in higher methods is, I judge, waning, and happily so. They have their usefulness; but it is one subsidiary to work in a broader field.

American libraries are growing far beyond the most sanguine expectations. When Gore Hall was erected, forty years ago, it was considered large enough for the accumulations of the rest of the century; but in twenty years there were calls for more space, and the least confident of us hardly expect that the century will go out without showing a capacity of shelves four or five times what was then contemplated filled to repletion. But the mere accumulation of books is not in itself sufficient: a great library should be a workshop as well as a repository. It should teach the methods of thorough research, and cultivate in readers the habit of seeking the original sources of learning.

The usefulness of any library depends largely on the character of its catalogue. I found a catalogue system in use here, devised by Professor Abbot, when he was an officer of the Library. It was a composite of two well-defined plans.

The first is the so-called dictionary system,—such as is exemplified, with differences, in the catalogues of the Boston Athenæum and of the Boston Public Library,—in which one alphabet is employed for author and subject entries mingled together. The simplicity of this method is its great advantage. From such a single alphabetical index, provided with abundant cross-references between synonymous titles and between general and specific headings, even an unpractised person can obtain a clue to the book he is seeking. But with these aids the single alphabet becomes cumbersome under countries and large municipalities and widely ramifying associations, when these are considered to be the authors of their publications, and also when groups of topics having geographical relations are placed under the names of countries, instead of being classed under the respective divisions of knowledge. The growth of libraries may compel some changes in the scheme as devised by the late Professor Jewett, and enforce further transfers of such entries to topical heads. This system also ordinarily omits groupings of kinds of literature, as classed by their forms, like poetry, drama, &c.; though lists of this sort can readily be made by way of supplements to the main catalogue, and are undoubtedly useful in popular libraries. Even in higher libraries, certain form-lists, when the extent of the literature embraced does not carry them to too great extent, become desirable, as with periodicals, serials, and publications of learned societies; and there is nothing in the fundamental arrangement of a dictionary catalogue to preclude these additions. With such helps, that form of catalogue is, in my judgment, best calculated to secure the greatest general use of a library, and to economize the time of the larger number of people. It is also rapidly becoming the system most in vogue.

The second system is the classified gathering of titles, according to some scheme of dividing all knowledge into sections and divisions which stand in some intelligible relation to each other, through absolute or supposed affinity. While all dictionary catalogues closely resemble each other, classified catalogues vary widely; and, as a general rule, no one can use a classified catalogue until he becomes familiar with it, and even those most accustomed to it are not infrequently at a loss, inasmuch as such relations as the classifications are based upon are not at all times viewed in the same light by the same person. With the inevitable changes in the accepted relations between different branches of knowledge, particularly in natural science, a classified catalogue is necessarily liable to become antiquated. Such a catalogue may, therefore, be rather an obstacle than an aid to the casual or infrequent user of a general library; and the bulk of those who resort to libraries are rather of this sort. For the adept, the classified system has undeniable advantages; and for the library of a union of scientists or other specialists, constantly invoking the aid of the catalogue, no other system is as good.

In the catalogue of this Library it was Professor Abbot's aim to preserve, in the main, the chief advantage, and to avoid the chief disadvantage, of each of the two systems. A prominent feature of his scheme was also the division of books not only with reference to subjects, but to form of literature, as Ballads, Drama, Fiction, Poetry, &c. In his plan, the arrangement of classes or subjects is throughout alphabetical, not scientific; but it differs from the simple dictionary system in this, that the natural subdivisions of many subjects, instead of being scattered through the general alphabet in the order of their names, appear in a secondary alphabetical series under the general head. If these subdivisions are comprehensive, the names of the particular topics which they embrace form another alphabetical series under them. No acquaintance with any scientific system of classification is needed in order to use the catalogue, the arrangement being everywhere alphabetical; but the student of any branch of knowledge must know its subdivisions, and then he has the advantage of finding the general treatises and the specific monographs all brought together. Under CHEMISTRY, for example, after the general works, the monographs on particular topics appear in one alphabetical series in the order of their names, as in a Dictionary of Chemistry; so under ZOÖLOGY — *Insects*, all the monographs relating to insects appear in one alphabetical series in the order of the names of their subjects. In the simple dictionary catalogue, all these would be scattered through the general alphabet. To many users of the catalogue, these alphabets within alphabets have an appearance of complication; and without cross-references, which have hitherto been very imperfectly supplied in the catalogue, the seeker will not always know under what general head in the alphabet some specific subject is to be looked for. I find that even the officers of the Library cannot always use the catalogue with facility, while many of those who frequent the Library are more or less perplexed by it. It must be admitted, however, that when its plan is understood and well fixed in the memory, it offers advantages for scientific or scholarly research to be derived only with much greater labor from the common dictionary catalogue.

Dr. Abbot's connection with the Library, as officer, ceased before he had perfected the details of his system. The scheme developed and grew upon his hands, and the work of the numerous assistants employed from time to time upon it was somewhat differently directed in the earlier and in recent years. Hence there are inconsistencies in the catalogue, — and inconsistencies are always stumbling-blocks in index-searching, — which, however, can in time be rectified. In a catalogue which does not, like a dictionary catalogue, carry its own key, finger-posts or guides, to mark the changes from groups to sections and branches, are very essential. But in Dr. Abbot's catalogue such supplemental aids, although originally intended and proposed as parts of the system, had been only to a small extent actually provided.

The problem presented to me by the state of this catalogue was a difficult one. My experience taught me that the catalogue as it was could not afford all the help which a catalogue should, in increasing the usefulness of a library like this. The alternatives were, either to remodel the catalogue, or to throw some permanent light on its arrangement. The first plan involved a reassortment of a million of cards, more or less; the interruption of the use of the catalogue in some measure, great at times, and always annoying, even if small; the disturbance of the habits of those who had become accustomed to its use, as a whole or in some of its parts; and the disappointment of those who appreciated its peculiar merits, and who would not willingly see it cast aside, until the details of the system as originally designed had all been carried out.

The second plan called for brief, printed explanations, conspicuous labelling and indexing of the drawers on their exterior, and the marking of the ramifications of the arrangement by guide-boards; this to be followed by printing a pamphlet to show the system by tabulation, with an index of it by subject-headings in one alphabetical list. The obstacles in carrying out the plan of remodelling were so great, that it seemed wiser to give the catalogue the advantage of all the elucidation just described; and to that end much of the work indicated has already been done, although the pamphlet still awaits the completion of the earlier labor. To prevent loss and misplacement of cards, from which the catalogue had suffered, a wire has been run through a perforation in the lower part of the cards, which serves also to support them so that the blocks for support formerly used with loss of space can be dispensed with.

I have confidence that the catalogue — so admirable in some of its features — can be made a valuable coadjutor in the important work of improving methods of study.

The Bulletin, or quarterly list of accessions, has been changed, to cover not only the additions to the College Library, but also those made to the departmental libraries. The specialists of the departments and the users of the central collection gain in this way knowledge of the resources of the whole University; and the record further serves to define and make known the respective limits of purchases in the several libraries.

In several respects, more intimate relations between the different libraries belonging to the University would be advantageous to all parties. Some method of concerted action in the purchase of books seems necessary, if the University's resources for that purpose are to be prudently used. As the purchases made for the Museum of Comparative Zoölogy cover to an appreciable degree the range of the purchases for the College Library, it seemed important that a record of the Museum's orders should be preserved at the College Library; and this has been done, with manifest advantage. To some extent, cataloguing is already done at the College Library for the Observatory Library, upon such books as chance to come under cover to Gore Hall. These are, I trust, but the beginnings of a perfected system of partially united administration.

Some change has also been made in the method of printing the Bulletin. Titles are sent to the printer as they accumulate, instead of at the expiration of the quarter. Proofs are returned in galleys; and these proofs are posted, as lists of the freshest accessions, not only here, but at the departmental libraries, the marks against the titles signifying in which library the books may be found. The proofs are also cut into strips by titles, and the printed titles thus obtained are pasted, in alphabetical order, into a large blank-book. This book has now become the most convenient key for all books added within the last two years, provided the name of the author is known, for it is much easier to consult than the cards in the drawers. At the expiration of the quarter, the titles are all in type in these successive galleys; so that the redistribution of the titles into one alphabet, and then the press-work, are the only impediments to a prompt issue of the Bulletin, — a delay rarely carried beyond a fortnight.

There needed, as I thought, to be added to the authors' list of the Bulletin something analogous to the subject part of the card catalogue; and with this view a Supplement was planned, the purpose of which was to give bibliographical information regarding current accessions and topics of interest. I hoped, also, that the officers of instruction would use it as a means of printing, in permanent form, the advice they give their classes concerning authorities and collateral reading in their respective subjects; and that they would work out the bibliography of subjects within the range of their instruction. I wished, also, by timely announcements of the progress of the Library, to supply data of interest to other libraries and to the friends of the University. In this work I needed the sympathy and co-operation of the professors and other instructors; and this support has been abundantly given me. I soon found that the work done was too elaborate and excellent to be left scattered through successive numbers of a periodical, which, by its nature, served rather a temporary than a permanent purpose. As the pages were stereotyped for the printer's convenience, it was an easy matter to arrange that the plates should serve for issuing these bibliographical contributions as monographs, on their completion as serials. I think that the publication made in this way will be welcomed beyond the limits of the University. The change in the character of the Bulletin has created a demand for it, elsewhere in this country and in Europe, among other libraries, and with teachers and specialists, whose wants were met by particular articles, so that it has become necessary to increase the edition largely. The demand is still rapidly growing.

In connection with this bulletin work may be considered two other publications, the second of which has been carried on by the contributions and pecuniary assistance of other libraries in Boston. The first is the printing — now in progress — of Mr. Samuel H. Scudder's Catalogue of Scientific Serials, which embraces all periodicals and serial publications of learned societies in the field of pure science the world over, whether existent or defunct, — a list never before attempted with equal fulness. Its publication was conditioned upon the obtaining of subscriptions sufficient to cover the cost; these have been secured. A small surplus of copies will inure to the Library's advantage by way of exchange for other publications. There seems every reason why the Library should undertake, under like conditions of security, the publication of other bibliographical works, which will be useful to scholars, and, at the same time, serve to enhance the usefulness of the Library.

The other publication is less extensive, — a list of all periodicals and serials now currently received by the several libraries of the University and by the principal libraries of Boston, with the designation of such libraries against each title, so far as the separate serials are taken at these libraries. It will serve as a guide to all users of this kind of literature, and will be the means of better providing against the taking in of a larger number of copies among the libraries of these adjoining communities than the demand for them warrants. In this connection, let me add that I see no good reason why, in regard to books not in common demand, there cannot be greater reciprocity of use among these neighboring libraries. With an express at our service, I have found no unwillingness in my *confrères* of other institutions to engage in some interchanging of this sort during the past year, and have even extended the service to remoter libraries. I try never to forget that the prime purpose of a book is to be much read; though it is equally true that we are under obligations to posterity to preserve books whose loss might be irreparable, and that the passing generation cannot always decide correctly which books are the most precious.

This community of use has already been established in some degree between this central collection and those of the departments.

I consider nothing of more importance than the provision of large classes of books to which unrestricted access can be had. At present, the inspection of the shelves is permitted to the officers of the University alone. The students can handle — this absolute contact with books is, in my judgment, humanizing — the newer books, as they stand on certain shelves, for a while after their accession; and alcoves, with tables, are also given to an ever-changing collection of books, designated by the several professors as collateral reading for their classes. These latter books, now conspicuously labelled with a different color for each professor, are retained from circulation, except at hours when the Library is not open. I mention later the extent of this limited home-use of these books.

When the rearrangement of the Library is completed, so far as the sections destined for the new book-room are concerned, and the original Gore Hall can be remodelled, I hope to see a wider latitude than this. I have sketched a plan for the reshelving of the gallery and the walls of the central area, — then to become the main reading-hall, — with a general disposition which is the counterpart of the new stack, and with a single unit of shelving space, as security that the least possible confusion shall ensue upon any further extensions of that part of the building. Electric lights in the roof would, I think, provide for the lighting of this reading-hall at night, with the least possible danger from fire; in which event, I hope to see the hall open in the evening. With processes of instruction which make success more and more dependent upon the free use of the Library by students, it seems to me a misfortune that the Library hours are limited to daylight during the short winter days, when most of the work is done. I can conceive that moral as well as intellectual good should come from the more liberal plan. I was much interested last year at Oxford to see the good use to which the old Radcliffe building had been put, by making it an evening annex to the Bodleian.

With this rearrangement of the hall, I had reserved in my mind the series of lower alcoves — removing the present central cases and substituting tables — to contain a succession of collections of the most useful books in all departments of knowledge, each alcove being given to a particular branch, of which the students could have unfettered enjoyment. I think there can be no difficulty about sufficient oversight; and I have confidence that it will stimulate inquiry, and give new resources to the instructors. I would not have these collections permanent, but shifting from year to year. Ten and even twenty thousand volumes can thus, I judge, be most profitably disposed.

In the adjacent room, — formerly the entrance-hall of the original building, — the space has already been divided into three ample stalls, with conveniences of shelves and table, for the use of scholars who may come to the Library for protracted investigations, or of the professors seeking more quiet than can be found in the public hall.

The new shelf-lists of the Library, prepared as rapidly as the new classification goes on, will be a most useful topical key to its resources. Indeed, the careful reassortment of the books now going on will in more ways than one be of assistance to all concerned with the Library, whether as officers or users.

I should be glad to see more constant use made of the Library by the whole body of instructors. The services of the staff are freely rendered to them, The printed bulletins are promptly despatched to them; and, in cases where closer watch of additions is of advantage, they can have the galley-strips also. I have taken pleasure in sending them immediate notice of the arrival of new invoices, that they may be the first to inspect the books. I shall be glad, as far as possible, to provide facilities for demonstrating methods of research for the higher classes.

On a suggestion received from Mr. William Cook, Instructor in German, I introduced during the winter a slight device, which has since been adopted in other libraries. Slips of paper, headed *Notes and Queries*, followed by a few words of direction, were prepared, and a row of hooks was arranged in a conspicuous place to hold them. A slip having been filled out with a question, and hung up, anybody who possesses the information wanted answers the question on the same slip, or refers the inquirer to the sources of information. The device has answered a good purpose, and I am glad to see that no unworthy advantage has been taken of it to ask silly or trivial questions.

Beyond the regular attendants upon the advanced instruction of the University, there is a considerable body of literary and scientific workers in Cambridge or its neighborhood, and, with the increase in the advantages of such a residence, the number is likely to increase. I have welcomed such to the Library, with pleasure; and, in cases where it seemed apparent that the cause of true learning would be advanced, their applications for the privilege of borrowing books have been forwarded to the Corporation, and upon approval granted. I know no cause to regret the courtesy which that board has shown in such cases.

It has occurred to me that each graduating class could very gracefully leave some memorial of their college years in Cambridge, by becoming, as a body, the patron of some department, or of a subject in some department, of the Library. The literature of the currency question as a topic rife in men's minds to-day, the history and antiquities of Cyprus, the electric light, are subjects which a class, leaving this year, for instance, might well make permanent provision for in the Library, as interesting topics in their year of graduation. A class would thus link its name permanently with the history of the Library in some special branch of knowledge.

The figures of the accessions of late years (given below), which I have derived since 1870 from Mr. Sibley's careful reports, represent the additions, with the duplicates thrown out; but a system of crediting accessions when received to the general account, and debiting them when disposed of, is better for our purpose, and in this way the figures for the present year are made out. Practically, however, Mr. Sibley's figures may stand, since the array of duplicates which he had thrown out were all disposed of in the autumn of 1876, and the proceeds have been bestowed upon new books. The accumulation of duplicates since that date is small, and it has been kept down by exchanges with other libraries, with which running accounts have been opened. The three principal libraries of this vicinity can well reciprocate in this matter, and thus obtain a considerable relief from the burden that useless duplicates entail. I hope, in the future, to send to the several libraries of the departments whatever of our duplicates would there be useful.

The accumulation of pamphlets in the Library is now large and valuable. I doubt if it is surpassed in value by any other in the country. My predecessor entertained a fit sense of the undeniable importance of them; and, as he worked for many years with insignificant means for the purchase of books, labor bestowed upon this department gave the only appreciable evidence of increase. With his proclivities for the study of American history, he selected the most valuable pamphlets upon that subject, and put them in sufficient binding for the shelves. They served to fill out the proportions of that department with a completeness no other section of the Library can boast; and they also for several years, very properly, swelled the count of volumes in his reports.

The constant use which is made of the pamphlet files, and the significance of their titles in the catalogue, as inducing such use, calls for a distribution of them as books, suitably bound and placed in their classifications; and I hope gradually to accomplish this for such as may seem by their importance to demand it. Meanwhile, pamphlets containing discussions of current topics are now made promptly available as books, by being placed between covers, which are kept in stock for the purpose.

The large mass of important pamphlets now tied in bundles, the long list of serials now received in paper, and the evidences of need of rebinding which are observable everywhere along the shelves, indicate the desirability of a University bindery; and I trust that the resources of the Corporation will in due time render the establishment of one feasible. The actual expenses for binding in some other of the departments, — the Law Library, for instance, — and the urgency for incurring such in others, — like the Museum and the Observatory, — indicate that all departments of the University would profit by it. Perhaps, with the completion of Sever Hall, rooms fitted for bindery work will become available in some of the older buildings. Having seen the bindery of the Boston Public Library grow from small beginnings to an establishment employing fifteen hands, and turning out fifteen thousand volumes a year, I speak from experience when I say that the advantages of a University bindery over the employment of outside binderies would be three: *first*, less cost per volume; *second*, much better work and material than it is possible to secure by the most particular specifications; *third*, convenience of access, and greater security for rarities. I have procured accurate estimates of the first outlay necessary.

The following figures represent the amount of binding done for the College Library during late years: —

1869–70	441 volumes.
1870–71	2,125 ,,
1871–72	2,944 ,,
1872–73	824 ,,
1873–74	2,537 ,,
1874–75	1,647 volumes.
1875–76	1,504 ,,
1876–77	1,277 ,,
1877–78	1,627 ,,

These figures do not include the binding done abroad of books purchased there; but they do include the binding of pamphlets, selected for their importance. Of the 1,627 volumes reported this year, 1,181 were bound outside the premises, and are exclusive of this preparation of pamphlets.

The last absolute count of the College Library was made in August, 1873, when the footings showed 134,275 volumes. Last year, Mr. Sibley estimated the Library at 164,000 volumes, and as many pamphlets. I judge that this enumeration of volumes fell considerably short of the actual number, as no account was made of the large number of serial volumes and periodicals, counted upon receipt as pamphlets, and subsequently bound and placed upon the shelves, without a change of count, as books. When the reclassification of the Library is completed, we shall be able from the shelf-lists to make a trustworthy count, and to report it with accuracy year by year.

The accessions of the past year foot up 8,362, — a number largely in excess of any growth of late years. It is but just to say that this includes duplicates and bound serials,—not exceeding together 500 volumes, however,—which are not embraced in the following figures of reported past accessions:—

1870	1,520 volumes.	1874	4,754 volumes.
1871	3,091 „	1875	5,828 „
1872	4,462 „	1876	3,752 „
1873	3,604 „	1877	3,741 „

Add to this total of 8,362, the accessions through the year to the various departmental libraries:—

Law School	557
Scientific School	97
Divinity School	114
Medical School	7
Museum of Zoölogy	373
Observatory	320
Bussey Institution	79
Peabody Museum	24
	1,571

And we have a grand total of 9,933 volumes, by which the Library of the University, as a unit, has been increased. This progress may be considered as quite equal to the normal increase of any other library in the country, not duplicating under the copyright law, and not catering by duplication to the popular wants of large communities. Of this number a considerable portion came from benefactions. Our records show that during the year nearly five hundred different bodies or persons, representing nearly every section of the globe, contributed to our growth, from one to six or seven hundred volumes each. It should be borne in mind, however, that the entire accessions are in reality gifts, since there are no means of adding to the Library, except from funds of individual benefactors. About one-third of the year's accessions of the College Library are direct gifts of books, a proportion sometimes exceeded in the past, as will be seen by the following comparisons:—

	Volumes bought.	Given.
1869–70	197	1,323
1870–71	1,575	1,516
1871–72	3,303	1,159
1872–73	2,578	1,026
1873–74	3,601	1,153
1874–75	2,699	3,129
1875–76	1,992	1,760
1876–77	2,894	847
1877–78	5,566	2,796

Of pamphlets, the accessions of late years stand as follows, for the College Library: —

1869–70	3,700	1874–75	4,665
1870–71	4,974	1875–76	2,954
1871–72	5,020	1876–77	2,270
1872–73	4,615	1877–78	4,750
1873–74	4,000		

These additions give the Library of the University, at the close of the past academic year, the following extent, —estimating rather under than above the probability, where positive data fail: —

	Volumes.	Pamphlets.
College Library	175,000	170,000
Law School	16,907	
Scientific School	2,083	146
Divinity School	17,000	
Medical School	2,000	
Museum of Zoölogy	11,970	5,000
Observatory	6,662	
Botanic Garden	2,921	1,193
Bussey Institution	2,077	681
Peabody Museum	270	305
Total	236,890	177,325'

This puts the Library of this University far ahead of any other collection of books, in connection with other institutions of learning in this country. Two other general libraries exceed it. The Boston Public Library, on the 30th of April last, had 345,734 volumes, of which 220,000 or 225,000 volumes may be considered in relative character the equivalent of this collection, the rest being duplications, mostly of popular books. The Library of Congress is a trifle less in extent, and stands second; but its duplications under the copyright act are very large.

There are two special departments of the College Library needing more attention than, in the present transition state of the book collection, the staff can bestow upon them. As soon as practicable, they must be put in better condition. They are those of maps and coins. The catalogue, printed under the direction of one of my predecessors, Mr. Benjamin Peirce, in 1831, of the rare collection of "ten thousand maps, charts, and views," collected by Professor Ebeling, of Hamburg, and constituting part of the gift of the late Israel Thorndike, is still a sufficient finding-list to that collection; and the section *Maps* of the card catalogue opens the resources of the Warden collection, a part of the gift of the late Samuel A. Eliot, and of others added since. The whole collection needs, however, to be rearranged, and to be supplemented by later issues. The collection of coins is partly arranged, in a case made for the purpose, and of these a MS. catalogue was made in 1859, by Mr. William Eliot Lamb. The later accumulations are considerable, and need to be as well cared for. During the year they have been increased by a collection of Roman coins, the gift of Mr. Robert N. Toppan.

Upon various collections of manuscripts, broadsides, scraps, engravings (apart from the Gray collection), there is much labor yet to be bestowed. One insecurely preserved collection seemed to imperatively demand immediate attention. I refer to the very large collection of printed accounts, reports, programmes, broadsides, and notices, illustrating the history of the College and University; and I have taken steps for the better ordering of them at once. It seems fitting that the Library should be in some sense a memorial of the graduates; and the good work for the preservation of all the publications of the graduates, begun and so enthusiastically carried forward by my immediate predecessor, I hope to sustain.

The work of the College Library staff, both in the catalogue rooms and in the delivery room, has gone on during the year with unavoidable obstructions, owing to the confusion incident to the rearranging of the books. The present catalogue was begun in 1861, and there still remain over twenty thousand volumes of the more difficult of the older books, whose titles are yet to be incorporated in the new catalogue, under author and subjects. A marked copy of the old printed catalogue of 1830–34 is at present the only clue to them; and for using that the author entry needs to be known. For the present, this "old work" is substantially at a stand; but I have arranged that it shall go on hereafter parallel with the reclassifying of the books, so that each department, as perfected in the new arrangement, shall stand completely embodied in the catalogue.

Mr. Fiske has furnished the following synoptical work of this department, since he joined the staff: —

CATALOGUE WORK, 1872-78.

Years.	Old Volumes.	Current Accessions.	Old Pamphlets.	Current Pamphlets.	Total.	Cards Written.	Old Cards Corrected.	Total.	Cards Distributed in Case.
1872–73	576	3,230	333	1,992	6,131	19,001	. .	. .	. .
1873–74	597	4,078	211	1,824	6,710	24,566	. .	. .	. .
1874–75	1,175	7,812	704	2,660	12,351	36,993	. .	. .	55,228
1875–76	5,458	5,199	1,014	1,850	13,521	40,429	19,148	59,577	45,023
1876–77	10,003	4,083	1,631	1,785	17,502	38,171	18,925	57,096	44,220
1877–78	6,379	5,382	485	1,120	13,366	44,914	18,142	63,056	57,115

The work of cataloguing pamphlets (except so far as the more important ones of the current accessions, and occasionally some from the back files, are put in covers to be classed as books) is now discontinued, till some systematic grouping of them as prospective books can be devised. There are no considerations except economy for treating pamphlets other than as books; and the users of a library are never thoroughly equipped for investigation as long as any distinction is made between them. A librarian's principle is to keep the pamphlet collection as small as possible, not by discarding any, but by amalgamating them with the books, as far as it can be done.

The figures representing the writing and distribution of cards are portentous. In the new catalogue cases, an increased capacity of about fifty per cent was provided for; but with additions to the cards, averaging 50,000 a year, and with the increase of the space they occupy, resulting from the introduction of guide-boards, the present cases will not suffice for many years, and there is no convenient space for their enlargement in the delivery hall, as at present constructed. An extension of it, northerly, along the wall of the original structure, with a glass roof, will have to be seriously contemplated, when the time comes for remodelling that part of the building.

I did not begin until February last to provide for a regular registration of the use of the Library, so that the figures given below do not represent a whole year. The record covers only such books as are delivered over the counter to the readers, either for taking from the building, or for use at the tables; and they do not include the large hall use of books of reference and new books, nor of the books temporarily shelved apart as collateral reading for the elective courses, nor of the currently received periodicals. I give them by months, as indicative of the relative value of the different months as reading periods, premising that the eight months probably do not yield results more than equal to those of the four earlier months of the academic year, not embraced in the record:—

	Loaned.	Hall Use.	Total.
February	3,073	1,303	4,376
March	3,959	1,585	5,544
April	3,362	1,191	4,553
May	2,833	1,299	4,132
June	2,133	675	2,808
July	1,018	167	1,185
August	934	269	1,203
September 1–25	874	235	1,109
Totals	18,186	6,724	24,910

In December, 1877, we began a separate record of the loaning of reference books overnight, and the slips show about 3,000 such deliveries for the rest of the year. They are not included in the above figures. This is an extension of use in addition to that of previous years, as is believed, and one which, I think, is destined to increase largely.

JUSTIN WINSOR, *Librarian.*

GORE HALL, Sept. 28, 1878.

TO THE PRESIDENT OF THE UNIVERSITY:—

SIR,—During the past year, both of the large telescopes belonging to the Observatory have been kept actively in use. It would be most unfortunate that either of these superb instruments should again be idle, or be employed without the hope of reducing the observations made with it, as has been the case in past years. Even now, the expenditure involved in using both instruments considerably exceeds the income of the Observatory, which must be enlarged unless the use of one telescope at least is greatly restricted. But it is hoped that the results of the year's work, which are stated below, will induce the friends of astronomy to prevent the recurrence of this necessity.

I shall first describe the work of the large equatorial telescope, and the various operations connected with it; then the observations made with the meridian circle; and afterwards the extension in the distribution of standard time signals, the progress made in reducing and publishing the past observations, the condition of the library, the present state of the attempt to increase the income of the Observatory, and the work proposed for next year.

The equatorial observations have been made under my own immediate direction, by Messrs. Searle and Upton, and by myself. The East Equatorial has been used on two hundred and thirty-nine nights during the year ending Oct. 31, 1878, mainly in a continuation of the photometric work projected last year. About 18,000 photometric observations have been obtained (22,000 in the fifteen months during which the telescope has been at work). The light of all the known satellites, except the two inner satellites of Uranus, which are too faint for observation with our instrument, has been carefully measured. The relative light of the components of all known double stars of the fifth magnitude or brighter, and visible in this latitude, has also been determined.

Four comparisons constitute a set, and the observations of each star comprise at least ten sets. Moreover, each star has been observed on three or more nights, and by two — or oftener by three — observers, to avoid errors due to the condition of the air or to individual peculiarities.

Other precautions have been taken to guard against various systematic errors which were from time to time apprehended. A careful study of the work shows that the probable error of the final results amounts only to about one-twentieth of a magnitude. Some sources of error, which may seriously influence ordinary estimates of stellar magnitude, have been detected. It appears that the proximity of a bright star may affect the estimate of the light of a faint star to the extent of two or three magnitudes! In the present series of measurements, this source of error is avoided.

By combining a spectroscope with a photometer like that used in the work just described, various parts of the spectra of β *Cygni* and γ *Andromedæ* have been examined, and the progressive increase in the relative light of their blue components towards the more refrangible end of the spectrum has been clearly shown.

The measurement of the very faint test objects selected and in part observed last year is now completed. The constant of the photometer with which these observations were made, has also been redetermined with great care.

One of the most important series of the equatorial observations of the year relates to the eclipses of Jupiter's satellites. Much value was formerly attached to these phenomena, as a means not only of determining the orbits of the satellites themselves, but of measuring the distance of the sun or the velocity of light, and of obtaining terrestrial longitudes. But for these purposes the observation of the mere appearance or disappearance of a satellite cannot well be made sufficiently exact. Large differences occur between the results of the work done by different observers or with different instruments. The state of the atmosphere at the time of any particular observation may also greatly affect it. Errors of this kind are much lessened by photometric observations of the satellites, as they gradually enter or emerge from the shadow of Jupiter, using the planet itself or another satellite as a standard. Each comparison thus obtained gives an independent determination of the time of the eclipse, free from the errors due to the condition of the air or the power of the telescope employed, and less likely to be affected by personal equation than the observation of a disappearance or reappearance. Since June 23, 1878, twenty-three eclipses have been observed, nine of them with both the East and West Equatorials. These thirty-two series comprise over eight hundred observations. Omitting those required to determine the full brightness of the satellites just before or just after their eclipses, there remain nearly three hundred from each of which the time of an eclipse may be deduced. This gives on the average nine observations in each series; and, supposing the value of each observation to be only equal to one of those usually made, gives us in one year an amount of material which it would ordinarily require nine years to collect. This estimate does not take into account the numerous cases in which many photometric observations of an eclipse may be obtained when the actual disappearance or reappearance cannot be observed, owing to clouds or accident of any kind. Moreover, by the ordinary method, an observation during twilight can have little value, while good photometric observations may be made as well then as at any other time. It is even possible to make them before sunset.

For the development, by the various kinds of work above described, of a branch of science which has heretofore received little attention, it has been necessary to devise a new class of instruments. These are designated in the records of the Observatory by the letters of the alphabet, the first which was constructed being called Photometer A, and the last Photometer O. The work of the year has mainly been done with Photometers H and I. Photometers L and M, which have as yet not been brought into systematic use, require special notice. Photometer M consists of a Rochon micrometer, in which the images of the two stars may be rendered equal in brightness by a Nicol. The positions and distances of the components of double stars may thus be measured with great precision, while the systematic errors occurring in measurements of the usual kind may be almost wholly eliminated. Photometer L is intended to measure the brightness, positions, or distances of any two stars the angular separation of which lies between 6′ and 40′. It resembles a double-image micrometer or heliometer, except that the full aperture of the telescope is used. The loss of light and deterioration of the images in these instruments is thus avoided.

By the liberal gifts to which reference is made on page 11, the construction of the photometers just mentioned, especially of those adapted for micrometric work, was rendered possible. Great credit is also due to Mr. George B. Clark, of the firm of Alvan Clark & Sons, without whose ingenuity and skill their construction would have been attended with great difficulty.

Besides the photometric observations made with the East Equatorial, it has occasionally been used in determining the places of asteroids, and for other purposes.

All the available telescopes of the Observatory were in use during the transit of Mercury last May, for observations of the diameter of that planet, as well as of its ingress and egress. The weather, unfortunately, seriously interfered with these observations. Photographs of the transit were also taken in co-operation with the U. S. Naval Observatory, upon dry plates sent from Washington, and returned for development and measurement. A few additional photographs were obtained, for preservation at the Observatory.

No expedition was sent from this Observatory to observe the

Total Eclipse of the Sun on July 29, 1878. In view of the pressing need of money for our immediate work, I did not feel justified in an expenditure the results of which might be negative. Aid was freely offered to other observers, by the loan of any instruments not in use at the Observatory. Three or four parties availed themselves of this opportunity, and instruments valued at two or three thousand dollars were thus used during the Eclipse. These instruments have been returned in good condition, and their use has been handsomely acknowledged in the printed reports. Leave of absence was given at this time to Mr. Leonard Waldo, who observed the Eclipse in Texas, and to Mr. Upton, who joined Professor Stone's party in Colorado.

A new method of measuring the transparency of the air has been employed during the past two months, by comparing the light of stars near the zenith and horizon. This promises to furnish a simple means of determining the coefficient of atmospheric absorption at different times and places.

Observations with the meridian circle have been made on one hundred and fifty-eight nights during the year. The observer in charge of the instrument has been, as in previous years, Professor W. A. Rogers, who has been assisted in reading the microscopes by Mr. J. F. McCormack. The observations of the stars between 50° and 55° north declination have continued without interruption. This great work, which has been carried on for eight years, will be completed by the end of December, 1878. Of eight thousand stars to be observed, only one hundred and thirty-four remain, all situated between 23^h and 5^h of right ascension.

Observations of a list of two hundred and fifty-eight stars, drawn up by the U. S. Coast Survey, at whose request the work was undertaken, were begun in January, 1878. Six observations of each star have thus far been made, with four or five exceptions. The method of observation in use here allows the observations to succeed each other at very short intervals, so that, although in some cases several of the stars are situated within a single minute of right ascension, the whole work will be completed by the end of 1878.

The whole number of observations made during the year is as follows: —

Zone Stars	1,510
Fundamental Stars	1,338
Coast Survey Stars	1,285
Miscellaneous observations	167
Total	4,300

The chronograph sheets have all been read as far as October, 1878; and the results, together with the circle readings, have been copied in permanent form. The reduction of last year's observations of the planet Mars, and of the comparison stars in the lists of Mr. Gill and Professor Eastman, has been completed.

The reductions of the Polar Catalogue of 1872–73 are completed, but considerable work still remains to be done in preparing the results for the press.

The observations of 1874–75, made upon the stars of the General Catalogue of Vol. X. of the Annals of the Observatory, have been reduced, and the work is now in process of printing. The discussion of these observations is still to be made.

The reduction of the observations made upon the stars of the Coast Survey has been somewhat more than half completed by Mr. Upton, who has this work in charge. The fundamental stars upon which these observations depend are one hundred and sixteen in number. The co-ordinates of these stars for 1878.0 have been derived from the following authorities: —

Greenwich	from 1870 to 1875, inclusive.
Washington	,, 1870 to 1874, ,,
Cambridge	,, 1871 to 1875, ,,

The positions taken from these sources have been reduced to the system of the Berlin Ephemeris of five hundred and thirty-nine stars, by applying corrections both for constant and for systematic deviations from this system.

A series of photometric observations have also been made, in which Professor Rogers has estimated the brightness of stars seen with various apertures. This furnishes a means of reducing to absolute measure the scale of magnitudes he has employed in the zone observations.

The general management of the time-service remains in charge of Mr. Leonard Waldo, who has been assisted, since July 1, by Mr. Frank Waldo. The signals have been distributed over a wider area than before. By the intervention of railroad and telegraph companies, they now reach Bangor, Lennoxville in Canada, Albany, and New York. The most important extensions of the service consist in the arrangements by which the signals are now sent through the northern part of Massachusetts to North Adams, and in the establishment of a time-ball at Boston. This last enterprise was made practicable by the liberal co-operation of the Equitable Life Assurance Co., and of the United States Signal Service. The ball is of copper, four feet in diameter, and weighs about two hundred and fifty pounds. It has a fall of about fifteen feet, and is held in place, when raised to the top of its mast, by a powerful electro-magnet. It is released at noon by the clock at Cambridge, which acts automatically through the telegraph line to the building of the Equitable Life Assurance Co., on Devonshire Street, where the ball is mounted. If, from any cause, the ball fails to drop at noon, it is released, in the manner just explained, at precisely five minutes after noon. Since July 12, a record of its performance has been kept, which is compared below with the records for a period of five years of the performance of the time-ball at Deal, England, dropped by the Royal Observatory at Greenwich. The figures show the percentage of results of each kind mentioned: —

	Time-ball at	
	Boston.	Deal.
Dropped by telegraph at $12^h\ 0^m$	89	86
,, ,, ,, ,, $12^h\ 5^m$	7	
,, ,, hand	1	9
Failed to drop	3	5

The success attained in the working of the time-ball at Boston is largely due to the zeal and skill displayed by Mr. Orrin Parker, Sergeant U. S. Signal Service, who has been stationed at Boston, and in charge of the ball since its establishment. He has been efficiently assisted by Messrs. J. H. Righter and F. W. Conrad, also of the Signal Service.

Arrangements are in progress with the Western Union Telegraph Co., for the distribution of time-signals to various cities desirous of receiving them from the Observatory. Inquiries have been made of the superintendents of New England railroads with regard to several points connected with proposed extensions of the time-service, the answers to which may be stated in brief as follows: —

Ninety per cent of the railroads consider it a convenience to travellers to have all trains run by the same time throughout New England. Ninety-three per cent consider that a uniform standard of time distributed over their lines would lessen the risk of accident; ninety-three per cent advocate a general distribution of the signals over all the New England lines at the same instant of time. A recourse to legislation to produce uniformity in railroad time is not generally favored, fifty-three per cent of the roads considering that the proposed object can be best accomplished by mutual agreement. For a time to use as the standard, sixty per cent favor Boston (the signals now sent from the Observatory), seventeen per cent New York, and the rest various intermediate standards. The standard now in use is in forty-seven per cent of the cases Boston time; in twenty-three per cent New York time; and in others various local times.

It may here be observed that no inconvenience can follow from the use of one standard of time over a large tract of country, even if it differs several minutes from the local time; and again, that if the use of local time is preferred, the same signals will still serve different places, which have only to consider the moment at which a signal is received as differing by a fixed number of minutes from noon or any other moment of Boston time (for example) selected for the transmission of the signal.

The new clock-room, described last year, has given complete satisfaction. Some changes have been made in the telegraphic circuits, so that either of the two lines from Cambridge may be available for dropping the time-ball as well as for distributing the signals. Messrs. E. Howard & Co. have placed one of their clocks, No. 191, upon the granite pier in the clock-room mentioned last year as designed for this purpose. This clock will be available as a substitute in case of need for the standard mean-time clock, Bond 394. Its performance is good, and it is kept within a small fraction of a second of the standard clock. The error of the standard clock, Bond 394, at 10 A.M. of each day (determined by clock comparisons, and of course not known with certainty when a long period of cloudy weather has occurred), has exceeded seven-tenths of a second on two days only during the year. Since July 1 it has exceeded one-tenth of a second on nine days only.

The reduction and publication of the past observations has been pushed as vigorously as our means permitted during the year. The two gaps in our series of Annals have been filled by the publication of Volume IV. Part 2, and Volume IX., so that the set is now complete from Volume I. to X. The amount of material still to be published will fill nine or ten volumes; that is, it will occupy almost as much space as all that the Observatory has published for thirty years past. If the observations were published in detail, as is the case at the Observatories of Greenwich and Washington, and as has been done heretofore at this Observatory, over a dozen volumes would be required to contain the observations already made. This includes only the material of whose publication there can be no question. Much remains which will not be issued, the lapse of time and other causes having seriously impaired its value.

This accumulation of valuable observations, the result of years of persistent labor, and of the expenditure of many thousands of dollars, is at present liable to destruction by fire or other accident. There is no absolute security from this danger until the volumes are published and distributed. The greatest need of the Observatory at the present time is the means of preparing this material for the press. By a sufficient increase in our clerical force, the expense need not be very great. It is not good economy, however, that much of my own time and that of my assistants should be spent on work which may be done by any copyist, as is now the case. Delay in publication not only diminishes the value of the work, but greatly increases the difficulty of preparing the manuscript for the printer. A delay of several years often renders it almost impossible to supply the details necessary to give the volume its greatest value. Moreover, there is danger that good work done here may be needlessly repeated elsewhere, if its publication be long delayed.

It seems hard that Professor Winlock, although for nearly ten years Director of this Observatory, did not live to see any of his own observations published, or even to complete the work of his predecessors. To avoid the increased accumulation of unreduced observations, a system of book-keeping has been introduced in the equatorial work, by which every day the observations of the previous evening are reduced as far as possible, and the results entered on sheets ready for the printer. This has enabled us to begin already the publication of the photometric work of the equatorial, although the entire system of observations is not yet completed.

During the past year an approach for wagons to the west wing of the Observatory has been laid out. A gardener has been employed for a large part of the summer in various improvements of the grounds, which have not been charged to the Observatory or College. No important change has been made in the building. Some upholstering, refurnishing, and additional book-shelves are much needed in the library and computing rooms. More pressing demands have prevented such an expenditure as is desirable on the library, and no shelf room now remains for the later accessions. The instruments remain in good condition, and have not suffered the deterioration to which they are liable when not used. The convenience of using the large equatorial has been greatly increased by the addition of large finding circles, and during the present month by the substitution of a new tail-piece.

The peculiar advantages already enjoyed by this Observatory make it apparent that even a comparatively small increase of its resources may reasonably be expected to yield more immediate and valuable returns than can in any ordinary cases be looked for from money laid out in the encouragement of science. Besides the libraries, scientific collections, and laboratories of the University, we have the similar institutions of Boston close at hand. Instrument makers of the very first rank in their profession are established in the neighborhood, and the instrumental equipment of the Observatory is in many respects unsurpassed elsewhere. Funds for the publication of observations which have been made ready for the press, and for the payment of current expenses (such as repairs, fuel, lights, and stationery), are already at our disposal. The true test of the power of an observatory, however, must be the income which is available for its strictly scientific work, after the mere cost of its maintenance has been paid. The amount of work done will obviously be directly proportional to this surplus, so long at least as it remains insufficient to give full employment to the principal instruments of the institution.

In the present case, any increase of the income of the Observatory may be directly applied to the promotion of scientific researches, and will accordingly yield unusually large returns in the form of published observations.

A year ago, the Visiting Committee, recognizing the great need of an increased income for the Observatory, undertook to supply this want. To these gentlemen my best thanks are due for their vigorous measures, which promise to instil new life into the Observatory. I must especially mention Messrs. Agassiz, Amory and Bowditch, as it was their energy and enthusiasm which overcame all the obstacles which presented themselves. A subscription was started to raise five thousand dollars a year for five years, in sums not less than fifty dollars annually. It was hoped that if the immediate needs of the Observatory could thus be met, results would be obtained that would render it easy hereafter to secure an increase in our permanent endowment.

A circular was distributed asking for subscriptions, payable in case the entire amount was raised. During the year ending Oct. 31, 1878, to which this Report relates, subscriptions amounting to thirty-two hundred dollars annually have been made. Since then, the subscription has proceeded very satisfactorily; and it is confidently expected that in a short time the entire amount will be received. As a complete list of the subscribers cannot, therefore, be given, it appears best to defer until next year's Report an acknowledgment of the individual subscriptions. I desire at this time to express to those who have already promised their assistance the great obligation the Observatory is under to them for the generous manner in which they have responded to its needs. The assurance of friendly sentiments toward the Observatory given by those who were unable to aid in this work has also been most gratifying.

Three subscriptions, by Mrs. Forbes, Mrs. Brooks, and Mr. Appleton, were made without the condition that the entire sum should be secured. This generous action has permitted the construction of the new photometers referred to above.

If the subscription succeeds, both telescopes will be kept in active use. The Equatorials will be employed in photometric observations of Jupiter's satellites, of variable stars, and of the standards with which they have heretofore been compared. A chart will be prepared of all the stars in the immediate vicinity of the pole, and standards for future reference of star magnitudes will be measured. The two micrometers noted above, if they accomplish all they promise, will open wide fields of work. It is hoped that observations with them may be reduced to a routine, and the work of the large telescope carried late into the night by observers employed for this purpose only. Next autumn, special attention will probably be paid to the planet Mars, which will then be more favorably situated for observation than will again be the case for many years. An extended plan of work has been laid out for the Meridian Circle. It is proposed to determine the absolute positions of a series of standard stars, independently of previous observations. The errors now carried from one catalogue to another will thus be eliminated. This will involve observations at short intervals during a greater portion of the day and night. The reduction of the work with both instruments will be kept up with the observations, as far as possible. It is hoped that at no distant day the past observations will be published, and new volumes of Annals issued within a few months of the completion of the observations.

It constantly happens that accurate measures of length are required in various portions of our astronomical work. The Prime Vertical Room is well adapted for this purpose, and will probably be fitted up for it. At present, it is used only for storing the duplicates of the Library, and other works not often consulted.

To recapitulate: Both telescopes have been in constant use, the distribution of standard time has been extended, and much progress has been made in the reduction of the past observations; but the present income of the Observatory will not permit this rate of work to be maintained. An increase of five thousand dollars a year for five years has been solicited, and if obtained will, during that time, more than double the scientific results of the Observatory, whose endowment, grounds, buildings, instruments, and library, represent a sum of more than $300,000. But little remains to be promised in order to secure the whole. If this can be done, rapid progress can be made in the publication of the accumulated mass of past observations, which are in danger of destruction by fire so long as they remain unprinted; and an activity can be maintained throughout the institution commensurate with its reputation at home and abroad.

EDWARD C. PICKERING.

TO THE PRESIDENT AND FELLOWS OF HARVARD COLLEGE: —

The Trustees of the Museum having, in accordance with the Acts of the Legislature (referred to in their last Report for 1876), transferred the property under their charge to the President and Fellows of Harvard College, the Legislature in January, 1877, passed an Act dissolving the Board of Trustees of the Museum; this is therefore the first Report I have the pleasure of presenting to the President and Fellows of Harvard College. The last Report submitted to the Trustees extended to the close of the year 1876. The present Report not only covers the year 1877, but the latter part of the academic year (1877–78), to September 1.

Only during the past eighteen months has the Museum enjoyed the income from the whole of the Agassiz Memorial Fund. The means thus placed at my disposal, in addition to assistance from other sources, has enabled me not only to push on the arrangement of the Museum very rapidly, but to lay up a building fund large enough to warrant a considerable addition to the present wing of the Museum building during the past summer. The Trustees of the Peabody Museum having decided that their building should form a part of the plan laid out by Professor Agassiz, it was made to harmonize as far as practicable with the existing wing of the Museum. A few changes, however, were suggested in the architecture of the roof and the proportions of the gallery windows, which changes have been carried out also in the new piece of the wing now in the course of erection; and it is hoped to modify the rest of the old building, so as to bring it into uniformity with the new work. This requires only a change in the roof, substituting a fire-proof roof for the old one, and the cutting down the gallery windows. The latter has already been done, and the increase of light in the galleries is very marked, besides the improvement in the external appearance of the building.

This addition will allow for the complete arrangement and exhibition to the public of the zoölogical collections. Although the additional room gained on the floors not devoted to exhibition will enable us to do much preparatory work for the exhibition of the palæontological and geological collections, little can be placed on permanent exhibition in those departments until the rooms now occupied for the different courses of instruction given at the Museum are vacated. These rooms are all intended for exhibition rooms in the above departments, and their place is to be supplied eventually by fitting lecture-rooms and laboratories in the new addition to the Museum building. During the early years of the existence of the Museum, every thing had to be sacrificed to the exigencies of the collections, which accumulated at first far too rapidly for their proper arrangement. Little by little, however, the collections have been made available; and in 1876 it became possible to enter upon the definite arrangement planned by the founder of the Museum. This involved the removal of all the objects then on exhibition, and their complete rearrangement. Thanks, however, to the energy and zealous co-operation of the Assistants of the Museum, no less than five rooms have been thrown open to the public, after a period of chaos lasting for over a year, during which plasterers, painters, and carpenters carried on their work, without, however, closing the Museum to visitors. The rooms now permanently arranged are: 1st, the synthetic room, containing a synopsis of the animal kingdom (living and fossil); 2d, a room devoted to the systematic collection of the Radiates, Sponges, and Protozoa; 3d, the lower floor of a room devoted to the systematic collection of Birds; 4th, the lower floor of the large central room devoted to the systematic collection of Mammalia; 5th, the galleries of these two connecting rooms containing the systematic collections of Reptiles and Amphibians; and, lastly, a room containing a Faunal collection of North America, — the Birds and Mammals being on the main floor, the Fishes, Reptiles, and Invertebrates in the gallery. I do not of course mean to say that these rooms are complete. They contain carefully chosen but sufficiently extensive selections from our collections in the different classes to give an excellent idea, for instance, of the classes of Mammals, Birds, or Reptiles (both living and fossil). These specimens are zoölogically arranged, and include all that is likely to interest and instruct the public. The specialist, meanwhile, will find in the store-rooms and work-rooms all he needs for his studies, with facilities for doing his work unmolested at all times. The space now devoted to the different classes of the animal kingdom contains all that we can hope to give for public exhibition, and, indeed, all that is desirable to give, no matter how extensive the collections may become hereafter; limited collections well assorted and labelled being far more intelligible to the general visitor than larger and more indiscriminate ones. This plan enables us to place on exhibition picked specimens, and to make the contents of each room, little by little, as significant as possible. It shows us at once our blanks, and the resources of the Museum can be expended in filling them. This still leaves us in the present building three exhibition rooms not yet completed. One of these rooms is to be devoted to the systematic collection of Mollusca, a second room will contain the systematic collection of the Fishes on the main floor, and in the gallery of the same room will be placed the systematic collection of the Articulates. These two rooms I hardly hope to open to the public before two or three years are over. The third room will contain on the main floor the Faunal collection of South America, while the gallery will receive the Fauna of Australia. The two exhibition rooms to be added on the completion of the new part of the wing will be devoted to Europeo-Asiatic, Indian, and African Faunal collections. We shall thus have on one floor, when this arrangement is finished, a series of systematic collections of the various classes of the animal kingdom, each class being placed by itself, so that the visitor will see only one thing at a time, and will not be bewildered by room after room or case after case of specimens which to him seem to have no meaning. In the synoptic room, for instance, he will get an excellent idea of the great types of the animal kingdom. He will then pass to a room containing a special class, perhaps that of Birds. There he will find a systematic collection of the class, giving him a broader view of the Birds, both living and fossil: he will not even there find every species, but such forms alone, with the necessary preparations in the way of skeletons, &c., as will give him a good general idea of the class of Birds. Should he wish to get some idea of the Avi fauna of North America, he will pass to the room containing the Faunal collection of that region, and there he will find the Birds characteristic of North America. When the other Faunal rooms are completed, he may pass from one room to another, and become successively acquainted with the characteristic Birds of Australia, Africa, India, &c. Of course, as far as possible, repetitions will be avoided in the faunal and systematic rooms, but this must of necessity be a work of time. This plan obviates the crowding together into one space of the whole collection of Birds, which, when arranged in the old way, merely satiates the visitor, and teaches him nothing. Of course, in such limited space (intentionally so restricted), only the characteristic groups of Birds can be placed on exhibition, and the rest of the collection is safely stored in drawers, where the skins are readily accessible and can be used for study. The intention is to carry on this plan for all the classes of the animal kingdom. There will remain unprovided for, as far as zoölogical collections are concerned, only the Marine Faunæ, it being impossible to connect them properly with any of the great terrestrial realms. It is therefore proposed hereafter to devote the main floor of two rooms, one to the Pacific Ocean, the other to the Atlantic Ocean, and to show in these the geographical distribution of marine animals, and as far as possible, by special collections, something also of the bathymetrical distribution. We hope eventually to carry out this double plan for the Palæontological Department, making one arrangement by Periods and another by Palæontological Series for the different classes. For the proposed location of the other collections, I will refer to the plans published with the Report of 1875.

The plan formerly proposed of labelling each room, so that the visitor should always know what he is looking at, has been carried out in all the rooms thus far opened to the public. Thus the visitor — on entering the Synoptic Room, for instance — finds the walls of the room labelled "Synoptic Collection of the Animal Kingdom." He further finds each case labelled with a general indication of its contents, and the contents clearly explained. On entering the room containing the systematic collection of Mammals, the visitor at once reads upon the walls that he is in the room containing the Systematic Collection of Vertebrates, the Class of Mammals. He will next find each case labelled with the name of the order, and frequently that of the suborder and even family. All this is done in each room with large, distinct letters, either on the walls or on the glass doors of the cases, arrows indicating the space to which the labels refer. Judging from the comments of the visitors who see this for the first time, the experiment has completely succeeded in its aim, — that of giving a clear and easily legible explanation of the collections thus far placed on exhibition.

For the past four or five years, no special attempt has been made to increase the collections. The force at the Museum has been occupied mainly in preparing our materials for exhibition, and rendering the collections easily accessible. Only the acquisitions demanded by our immediate wants have been made. The principal additions to our collections have therefore been among Birds and Mammals; a large number of skins and skeletons having been added to our faunal and systematic series. The additions to the Conchological and Entomological Departments have been mainly made through exchanges. The Loew collection of Diptera, purchased some time ago with the Gray Fund, has been received at the Museum; and to Baron Osten-Sacken the Museum owes a large addition in the same order. In the Herpetological Department, the principal collection received, in addition to an extensive series of exchanges, has been a number of skeletons purchased in Europe. By far the most important additions received for many years are the results of the dredgings which I made during the past winter in the Gulf of Mexico, in the United States Coast Survey steamer "Blake." These, added to the collections already in the Museum from the expeditions formerly in the charge of the late Professor Agassiz and of Count Pourtalès, probably give the Museum, after that made by the "Challenger," the richest deep-sea collection in existence.

It is now ten years since Dr. Hagen became connected with the Museum. During his administration of the Entomological Department, the collections have more than trebled in size; and I may call attention to the biological collection, which owes its existence and present condition entirely to his care. It contains about three thousand species of all orders, and far surpasses any existing collection.

For the first time, the name of one of the most enthusiastic and distinguished of our Assistants does not head the annual report hitherto so carefully prepared by him. The death of Mr. Anthony, which occurred on October 16th, has brought to a close a long term of faithful service. Mr. Anthony became connected with the Museum in August, 1863, and from that time until his decease his time and energies were given to the department of Conchology, with such assiduous and entire devotion as is rarely equalled. He was a recognized authority on American Land and Fresh-water Mollusca; having shared pioneer work upon them with Say, Haldeman, Conrad, and Lea. His descriptions of species — more numerous than is generally known, since many of them antedate the recollection of younger conchologists — are to be found in the earlier volumes of most of our scientific journals. He had held correspondence and conducted exchanges with almost all active conchologists and shell-collectors of his time, who never failed to appreciate the remarkable skill in exchanging, the complete knowledge of the relative value of specimens, and the wide acquaintance with the traditions of Conchology, which were fruits of his long experience. He died at the age of seventy-three years, after a sickness of five weeks.

It is particularly gratifying to me to speak of the thorough co-operation now existing between the University and the Museum Library, and to recognize the cordial assistance given by Mr. Justin Winsor, the Librarian of Harvard College, to the Museum Librarian.

The publications of the Museum during the past eighteen months have been more numerous than during any previous corresponding time. The fourth volume of the Museum Bulletin, devoted to the Terrestrial Mollusca of the United States, by Mr. W. G. Binney, has been published, pp. 239, plates 100. The Museum is indebted to Mr. Binney for the large number of plates which accompany this volume. Mr. Binney has also presented to the Museum all his MS., as well as the copper-plates belonging to the Terrestrial Mollusks of North America, by Amos Binney. The first six numbers of Vol. V. of the Bulletin, containing articles by Messrs. Agassiz, Faxon, Prime, and Benton, have been distributed.

To Mr. Temple Prime we owe the plates which accompany his paper on Corbiculidæ; and to the Hon. Carlile P. Patterson, Superintendent of the United States Coast Survey, the small map of the Hydrography of the Gulf of Mexico, which accompanies Bulletin No. 6.

In connection with Professor J. D. Whitney and the Geological Survey of California, the Museum has published No. 2 of Vol. VI. of the Memoirs on the Fossil Plants of the Auriferous

Gravel Deposits of the Sierra Nevada, by Leo Lesquereux, pp. 58, 10 plates.

The Hydroids of the Gulf Stream, collected by Mr. Pourtalès under the auspices of the United States Coast Survey, have been fully worked up by Professor George J. Allman, of London, and published, with the permission of the Superintendent of the United States Coast Survey, by the Museum as Vol. V. No. 2 of its Memoirs, pp. 54, plates 34. Finally, I have myself issued, as one of the Museum Memoirs, the materials left by Professor Agassiz to form the fifth volume of the Contributions to the Natural History of the United States, pp. 136, 20 plates, as Vol. V. No. 1.

In addition to these publications, I could refer to papers of Baron Osten-Sacken, Mr. R. McLachlan, of Mr. Fauvel, of Baron Sélys Longchamp, who have availed themselves of Museum material placed at their disposal, besides those published by the Museum Assistants in other serials than those of the Museum. Dr. Steindachner has continued in the Proceedings of the Vienna Academy the descriptions of many new species of fishes collected by the Thayer Expedition.

Very gratifying returns are received at the Library in exchange for our publications, the societies with which we now exchange regularly having increased in number during the past year. It is, however, questionable how far the system of exchanges now generally carried on by scientific societies is remunerative.

As in former years, large collections have been sent to specialists for examination or for the preparation of special reports in expeditions undertaken with the supervision of the Museum. These Reports are to be published either by the Museum or in connection with other publications. Collections of Crustacea have been sent to Professor Alph. Milne Edwards; of Annellids, to Professors Ehlers and Perrier; of Star Fishes, to Professor Perrier; of Cephalopods, to Professor Carus; of Sponges, to Professor Schmidt; Hydroids, to Mr. Clarke, of the Johns Hopkins University; Mollusca, to Mr. Dall, of the Smithsonian; and Crinoids, to Sir Wyville Thomson.

During the years 1862 to 1864, a number of collections were sent from the Museum to schools and colleges, not only in the State, but also throughout the country. From 1864 to 1876, collections have been sent at irregular intervals to complete, as far as possible, the series intended for instruction in our schools. Since 1876, the date of the last Report, an unusually large number of collections have been sent out, supplementing those previously sent to High Schools, Normal Schools, and Colleges in the State: to the eight State Normal Schools; to the Public Schools of Boston, through Miss Crocker; to Amherst and Williams Colleges; to the Peabody Academy at Salem; to the Boston Society of Natural History; to the Wellesley College; to the Springfield City Museum; to the Cambridge High School; to the Museum at Gloucester; to Mount Holyoke Seminary; to Maplewood Institute, Pittsfield. Similar collections have been sent outside of the State to Chicago, to Cornell University, to Salt Lake City, to Brown University, to the University of Michigan, to Hillsdale, to Buffalo, to Kentucky, to Oberlin College, to Marietta. As far as practicable, similar educational collections will always be cheerfully sent, when the time of our staff will allow.

The general instruction at the Museum has been in charge of Professors J. D. Whitney, Shaler, Dr. James, Professor Hamlin, Dr. Faxon, Dr. Mark, Mr. Wadsworth. Special students have also received facilities for work as well as guidance in the different Laboratories of the Assistants.

The Sturgis-Hooper Professor of Geology, Professor J. D. Whitney, has given twice a week throughout the year lectures in Economic Geology to special students, candidates for the degree of Ph.D., and to Seniors and Juniors. He also gave instruction in Physical Geography during the greater part of the year to Sophomores and Juniors. During the past year, Professor Whitney has also made preparation for a thorough course in Lithology, and has engaged Mr. Wadsworth as his Assistant in that department. By Professor Whitney's care, a large number of rock sections have been made for the use of the students in Lithology: a part of his private lithological collection has been unpacked, and made available at the Museum, thus placing the lithological department on a very creditable footing. A beginning of a special geological library has also been made by Professor Whitney, which, though incomplete as yet, is probably the best in the country. The Corporation have appropriated the larger part of the expenses of bookcases for its reception.

Professor Whitney, besides defraying the greater part of the expenses of publishing Vol. VI. Part 2 of the Memoirs, has also, in addition to other expenses, provided himself the needed Assistants for the instruction in his department; the funds at present at the disposal of the Geological Department not being sufficient to more than pay the salary of the Professor, a condition of things which, it is hoped, will not continue long in so important a department of the Museum.

Professor N. S. Shaler has given instruction in general geology during the past year to seventy undergraduates and four graduates, the work consisting of lectures and field-work. In Palæontology there were fourteen undergraduates and three graduates who received instruction by lectures and laboratory work. Professor Shaler has also continued his usual summer course in connection with the Geological Survey of Kentucky.

Dr. William James gave instruction during the past year in Comparative Anatomy and Physiology of Vertebrates to a number of undergraduates, varying from eighty to ninety. The course was similar to that given the previous year. The more practical and human parts of the subject seem to awaken the most general interest. Since the resignation of Professor McCrady, the instruction in zoölogy has been divided between Dr. Faxon and Dr. Mark; Dr. Faxon taking charge of the Radiates and Crustacea, Dr. Mark of the Mollusks and air-breathing Arthropods.

Aside from the work of instruction, Dr. Mark gave considerable time, especially in the first half of the year, to the collection of Vermes in the Museum. This collection has been assorted and arranged according to orders. The bottles have all been thoroughly cleaned, and alcohol changed when necessary. The critical study and determination of specimens have only been begun. A small number of contributions from outside have been received. There have been sent from this collection: 1. All the Lumbricidæ to M. Perrier; 2. All Vermes of the Hassler Expedition to Professor Ernst Ehlers, also those of the "Blake" Expedition.

During the winter of 1877 to 1878 from December to March, I was invited by the Superintendent of the United States Coast Survey to join the steamer "Blake," and carry on extensive dredging operations in deep water in the Straits of Florida, the Yucatan Channel, and in the Gulf of Mexico. A preliminary account of this first expedition will be found in Bulletins No. 1 and 6 of Vol. V., two letters addressed to the Superintendent of the Coast Survey on the results of the expedition, and the disposition made of the collections for publication. I may add that the "Blake" is fitting out for a new cruise to the West Indies, and that I shall again be allowed to join her, and continue the work so successfully commenced. Mr. Garman accompanied me in the "Blake." Although I have in my letters acknowledged my indebtedness to the officers of the "Blake," I cannot allow this opportunity to pass without reiterating my thanks for their interest in my work, and more specially to Captain C. D. Sigsbee, to whom so much of the success during our last cruise is due.

During the early part of 1877, I spent a couple of months at Edinburgh, at the invitation of Sir Wyville Thomson, who was kind enough to ask me to assist him in assorting the magnificent collections made by the "Challenger" for distribution among the different specialists who were to take charge of them. Sir Wyville Thomson generously proposed to allow two of the collections, the Echini and the Ophiuridæ, to come to this country; and these collections are now safely deposited in the Museum, where Mr. Lyman and myself are preparing the Reports on the Ophiuridæ and the Echini. Mr. Lyman is now printing a Preliminary Report on the Ophiuridæ, accompanied by ten plates. I have made fair progress with the text of the Echini, and thirty lithographic plates are nearly finished for the final Report.

To Messrs. Cabot, Lyman, and Pourtalès, the Museum is indebted for voluntary work and other valuable assistance. I have been relieved of much tedious detail by the Bursar of the College, Mr. Allen Danforth, who has taken charge of the Museum accounts since the transfer of the property from the Trustees to the President and Fellows of Harvard College.

Although summer instruction in Zoölogy has been abandoned at the Museum, I have been able in my new Laboratory at Newport to give facilities for work to half a dozen teachers (three ladies and three gentlemen); and it is my intention hereafter to divide the facilities at my command between students of the

Museum and teachers of our common schools, who must, however, be sufficiently advanced to study for themselves with profit.

The new Laboratory erected by me at Newport is twenty-five feet by forty-five. The six windows for work are on the north side, and extend from the ceiling to within eighteen inches of the floor. In the spaces between the windows and the corners of the building are eight work-tables, three feet by five, covered with white tiles, one foot of the outer edge being covered, however, with black tiles for greater facility in detecting minute animals on a black background. Between the windows, movable brackets with glass shelves are placed; while similar brackets extend across the windows and between the tables, thus providing a shelf at any desired height. The tables for microscope work are three-legged stands of varying height, adapted to the different kinds of microscopes in use. The whole of the northern side of the floor upon which the work-tables and microscope-stands are placed is supported upon brick piers and arches independent of the main brick walls of the building, which form at the same time the basement of the building. The rest of the floor is supported entirely upon the outside walls and upon columns with stretchers extending under the crown of the arches reaching to the northern wall. This gives to the microscopic work the great advantage of complete isolation from all disturbance caused by walking over the floor. This will be duly appreciated by those who have worked in a building with a wooden floor, where every step caused a cessation of work, and was sure to disturb any object just at the most interesting moment. The floor is cemented, and covered by a heavy oil-cloth. The centre of the large room is occupied by a sink, on each side of which extend two long tables, three feet by twelve. These are covered with different colored tiles, imitating mud, sand, gravel, sea-weed, black and white tiles, as well as red, yellow, blue, green, violet, to get all possible variety of background. A space at each end is covered by a glass plate, allowing the light to come from underneath, thus enabling the observer to examine larger specimens from the under side, without disturbing them when fully expanded. Two shorter and narrower tables, eighteen inches by seven feet, are placed half-way between these central tables and the southern face of the building. These tables are intended for larger aquaria or dishes, and are covered with common marble slabs. There is a blank wall on the south side, the whole of which is occupied by closets and shelves for storing glass jars, reagents, bottles, dishes, and so forth. A space is devoted to books. The open shelves for jars and dishes are of heavy rolled glass, supported upon iron brackets. The basement is used for the storage of alcoholic specimens, dredges, trawls, and other similar appliances. In the attic there is a large tank for salt water and another for fresh: the rest of the attic space will be eventually devoted to photographic rooms and room for an artist. The Laboratory is supplied with salt water by a small steam-pump driven by a vertical boiler of five-horse power: this is kept going the whole time day and night, the overflow of the tank being carried off by a large pipe. The water is taken some distance from the Laboratory, and drawn up at a horizontal distance of sixty feet from the shore in a depth of some four fathoms, the end of the suction pipe standing up vertically from the ground a height of five feet, and terminating in an elbow to prevent its becoming choked. The water is led through iron pipes coated inside with enamel. From the tank, the salt water is distributed in pipes extending in a double row over the central tables, over the long narrow tables for aquaria, and along the whole length of the glass shelves on the south wall. Large faucets to draw off salt water are placed at each sink; and by a proper arrangement of valves it is possible to lead fresh water to a part of the pipes, in case it is needed. The pipes leading over the tables and shelves are provided with globe valves and nozzles, to which rubber pipe can be attached and the water led to a vessel below: there are fifty such taps, each of which can supply water or air to at least three or four jars. The overflow runs into gutters laid alongside the tables, leading into the main drain pipe. To aerate the salt water, I use an injector invented by Professor Richards of the Institute of Technology. This can be used to supply aerated water directly to the jar by providing it with a siphon overflow, or the aerated water can be collected in a receiver, from which air alone is then led to the jar. This latter course is the only practical one for delicate specimens, and for the bulk of the work of raising embryos. The east and west sides have large windows and doors provided with blinds; they always remain open, with the blinds closed to keep out sun-light, and serve to ventilate the Laboratory thoroughly. Large tables for dissection, covered with slate and adjoining a sink provided with fresh and salt water, are placed across the windows of these sides.

Ever since the closing of the school at Penikese, it has been my hope to replace, at least in a somewhat different direction, the work which might have been carried on there. It was impossible for me to establish a school on so large a scale; but I hope, by giving facilities each year to a few advanced students from the Museum and teachers in our public schools, to prepare, little by little, a small number of teachers, who will have had opportunities for pursuing their studies hitherto unattainable. The material to be obtained at Newport is abundant. The dredging is fair, and not difficult, as the depth in the immediate neighborhood does not exceed twenty to thirty fathoms. The pelagic fauna, however, is the most abundant. During the course of each summer, by the use of the dip-net, representatives of all the more interesting marine forms are sure to be found. With my small steam launch, a large space can always be traversed any evening, and advantage taken of the condition of the wind and tide, the launch being amply large for easy dredging in the moderate depths of the entrance of Narragansett Bay. The Laboratory is placed on a point at the entrance of Newport Harbor, past which sweeps the body of water brought by each tide into Narragansett Bay, and carrying with it every thing which the prevailing south-westerly winds drive before it. Newport Island and the neighboring shores form the only rocky district in the long stretch of sandy beaches extending southward from Cape Cod, — an oasis, as it were, for the abundant development of marine life along its shores.

ALEXANDER AGASSIZ.

CAMBRIDGE, September, 1878.

APPENDIX.

I.

HARVARD COLLEGE, Oct. 21, 1878.

DEAR SIR, — I respectfully invite your co-operation in an effort to obtain evidence of the effect of college scholarships on the recipients and the community.

In the college classes from 1853 to 1872, inclusive, two hundred and eighty-two (282) persons received scholarships. The college records give the facts concerning these persons, so far as their college life goes. I desire to ascertain what they have been and done in after life. The main points of inquiry are as follows: —

1. The training they received after leaving college.
2. The employment they have had.
3. The services they have rendered to the community as teachers, writers, ministers, lawyers, physicians, or otherwise.
4. The means of influence which they now command.

I should like to know, further, what measure of health they have enjoyed; how they have personally prospered in life ; and whether, on looking back, their holding of scholarships seems to them to have materially influenced their careers.

The number of persons who held scholarships during those twenty years is sufficient to make it certain that a judicious summary of the facts would be a valuable piece of evidence on a subject which yearly becomes more and more important. The following figures show the responsibility which rests on those who administer scholarship trusts; and the importance, on the one hand, of arriving at the best attainable method of awarding scholarships, and, on the other, of demonstrating beyond reasonable doubt the public utility of a well-guarded scholarship system: —

Money paid on scholarships in Harvard College from 1852 to 1878, inclusive	$275,634.20
Present annual payments on scholarships in Harvard College (about)	25,000.00
Present annual payments in aid of poor students in the whole University (upwards of)	40,000.00

As you received during your college course some aid from scholarship funds, I am led to address myself personally to you, and to ask you to give me in brief those facts of your life which in your judgment are pertinent to this inquiry.

Such facts as you may make known to me will, if you desire, be regarded as confidential, to be used only in a summary or digest. If, on the contrary, in view of the public object to be attained, you do not object to a suitable publication of the facts you give me, in connection with a mass of similar information, I shall be much obliged to you if you will indicate your assent to publication. It is in my next Annual Report that I propose to discuss this subject. This Report is not published in the ordinary sense, but is distributed gratuitously to alumni, colleges, libraries, and persons interested in university education.

Thanking you in advance for the trouble which your answer to this application will give you, I am

Very truly yours,

CHARLES W. ELIOT, *President.*

II.

AT a meeting of the President and Fellows of Harvard College, in Boston, July 8, 1878, the following communication was received from Theodore Lyman, Esq., Secretary of the Committee of Fifty: —

TO THE PRESIDENT AND FELLOWS OF HARVARD COLLEGE: —

At a meeting of the Committee of Fifty on the Harvard Memorial Hall, held May 14, 1878, the following memorandum for a transfer of Memorial Hall to the President and Fellows of Harvard College was unanimously adopted: —

1. Whereas, on the 19th of July, 1865, the Association of Alumni of Harvard College appointed a committee of fifty persons with full powers to erect a Memorial to graduates and students of the University who died in defence of the Union, or who served in its defence during the Rebellion of 1861; and

2. Whereas, the said committee accepted the said trust, and determined to erect a Memorial Hall, consisting of three parts, namely, a Dining Hall, a Memorial Transept, and a Theatre for public exercises, and raised a large sum of money by subscriptions; and

3. Whereas, the President and Fellows of Harvard College did assign the "Delta," so called, as a site for said Memorial Hall, under this condition, among others, that the said Committee of Fifty should control the said "Delta" for not more than fifteen years, or until the hall was finished, and that thereafter the said hall was to be held by said President and Fellows for the purposes for which it was designed, and for no others; and

4. Whereas, the said Dining Hall and Memorial Transept have been built by said subscriptions, and the said Theatre has been built for the greater part by a bequest of the late Charles Sanders, but in part also by said subscriptions, so that now the entire Memorial Hall is complete, and the said Committee of Fifty desire to be discharged of their trust; therefore,

Voted, That the President and Fellows be asked to receive and maintain the building so erected on the "Delta," under the following conditions: —

1. The name of the entire building shall be Memorial Hall; the names of the western, the central, and the eastern divisions shall be, respectively, Dining Hall, Memorial Transept, and Sanders Theatre.
2. The said President and Fellows shall see to it that no inscription, picture, bust, tablet, monument, or memorial shall be allowed in or upon said hall, which is inconsistent with its intent and design, as more particularly set forth in the first paragraph of the preamble to these votes, or which is, by their judgment, in bad taste.
3. The said hall shall be used, under control of said President and Fellows, only for such purposes as are consistent with its known intent and design.

Voted, That when the said President and Fellows shall, by a vote, have accepted the said hall upon the above conditions, that then this Committee of Fifty shall be dissolved.

A true copy of record.

Attest: (Signed) THEODORE LYMAN, *Sec'y.*

Whereupon it was

Voted, That the President and Fellows accept with profound gratitude this splendid and precious gift;

That they receive, and will maintain and use, Memorial Hall upon the conditions, under the restrictions, and for the purposes above set forth;

That an attested copy of this record be sent to the Secretary of the Committee of Fifty.

And whereas, Memorial Hall is, in the opinion of the President and Fellows, the most valuable gift which the University has ever received, in respect alike to cost, daily usefulness, and moral significance, —

Voted, That the University is under lasting obligations to the original promoters of the enterprise, to the subscribers, to the Committee of Fifty, and to the officers and agents of that Committee, who for thirteen years have given time and labor without stint to the prosecution of the work;

Voted, That the President be requested to send special letters of thanks to Hon. John G. Palfrey, Chairman of the Committee of Fifty, Henry Lee, Esq., Treasurer of the Committee, Henry B. Rogers, Esq., Chairman of the Building Committee, Amos A. Lawrence, Esq., Chairman of the Finance Committee, and Messrs. Ware & Van Brunt, the architects, and to congratulate them upon the eminent success which has crowned their long and responsible labors.

III.

RETAIL PRICES OF PROVISIONS IN CAMBRIDGE.

Pound of	1858.	1859.	1860.	1878.
Rump Steak . . .	.17 – .20	.16⅔	.18	.25
Rump Beef . . .	.12½	.12½	.12½	.12½
Round of Beef . .	.12½– .14	.12½	.10	.12½– .14
Tips of Sirloin . .	.12½	.12½	.12½	.17
Best Cuts Sirloin .	.17	.16⅔	.16⅔	.25
Legs of Mutton . .	.12½– .17	.12½	.12½	.12½– .17
Mutton Chops . .	.12½	.12½	.12½	.12½
Hind Qr. Lamb . .	.14	.12½	.12½	.12½
Shoulder of Veal .	.10	.12½	.12½	.10
Veal Cutlet . . .	.17	.18	.18	.25
Ham	.12½	.12½	.14	.10
Turkeys	.12½– .17	.12½– .17	.12½– .17	.12½– .17
Fresh Pork . . .	.09	.12½	.12½	.08
Sausages	.10	.12½	.12½	.10
Salt Pork	.14	.11	.10	.10
Corned Beef . . .	.09 – .10	.10	.10	.08
Lard.	.12½– .15	.14	.14 – .16	.12 – .13
Eggs (dozen) . . .	.15 – .26	.17 – .28	.17 – .27	.18 – .34
Potatoes (bushel) .	.88 –1.00	.80 – 1.00	.68 – 1.00	.75 – 1.10
Sugars	.08 – .11½	.09 – .11	.09 – .11	.09 – .11
Butter	.20 – .28	.25 – .28	.23 – .29	.28 – .32
Flour (barrel) . .	7.25 –9.00	9.00 –10.50	8.75 – 9.50	7.50 –10.00
Coffee	.18 – .20	.20	.18 – .22	.40
Tea	.50	.50	.50	.50 – .85
Cheese	.12½	.14 – .15	.14	.14 – .21
Molasses (gallon) .	.88 – .44	.37½– .40	.40 – .50	.65
Vinegar (gallon) .	.20	.24	.20	.25 – .37
Codfish (Salt) . .	.05	.05	.05	.07 – .08
Hominy	.05	.05	.05	.06
Cracked Wheat (bag)	.78	.50 – .60	.50 – .56	.70
Buckwheat (bag) .	.56 – .60	.56	.50 – .56	.88 – .50
Raisins	.16⅔	.16⅔	.12½– .16	.15 – .16
Maccaroni	.18	.18	.18 – .20	.20 – .22
Beans (bushel) . .	3 00	3.00	2.80 – 8.00	8.00
Meal (bag) . . .	1.90	2.10 – 2.25	1.65 – 1.75	1.85

IV.

At a meeting of the President and Fellows of Harvard College, in Boston, April 8, 1878, the following letter was received:—

100 Beacon Street, Boston,
March 21, 1878.

Charles W. Eliot, Esq.,
President of Harvard University:—

Dear Sir,—As one of the trustees of a fund for benevolent purposes bequeathed by my father, Mr. George O. Hovey, I am authorized to submit to you a proposal to give the sum of ten thousand dollars ($10,000) to the

Harvard Medical School, if its advantages can be offered to women on equal terms with men.

My father made this an express condition in a plan once formed by him for an educational endowment, and it is hoped that the Medical Faculty of Harvard University will not consider it an insuperable obstacle to the acceptance of this offer. The long list of women physicians in our city directory, and the large number of graduates from the Medical School of Boston University, show that an increasingly large number of women are finding place in the community as physicians; and many persons view with consternation the inevitably poor preparation for their work which the majority of them can gain. Few women students can afford to go to Europe for the education which is offered them by some of the best medical schools there. It may, however, be made possible to demand from them the same test of preliminary fitness for their profession that may now be asked from men; that is, study under the best instruction which our country can give.

In hope that this matter may be brought before the Board of Overseers, and some action be taken on it, I am, Sir, &c.,

(Signed) MARIAN HOVEY, *Trustee.*

Voted, That the question of accepting the offer contained in the letter of Miss Hovey be referred to the Overseers, for their consideration and advice.

V.

HODGES SCHOLARSHIP.

I GIVE to the President and Fellows of Harvard College the sum of five thousand dollars. It is my wish that this sum should be safely invested, and that the income or interest statedly accruing from it should be added to the principal, until it shall have accumulated to the amount of ten thousand dollars. And then it is my wish that one-half of the annual interest or income of the whole amount should be presented, from year to year, to a meritorious student, without pecuniary means, of the Senior Class, — his merit depending, without reference to scholarship, upon diligence and good character, though scholarship is to be no bar to the beneficence to be bestowed. The other moiety is to be added to the principal annually for the full term of ten years, at the expiration of which time the fund shall be considered as established. And then one half of the income is to be appropriated as above specified, and the other half at the discretion of the President of the College.

Though such a condition is not imposed, it is to be hoped that each beneficiary of this fund, if he should be pecuniarily successful in life, will be disposed to restore to the fund, either in part or in whole, the value which he received; that this resource of student assistance and encouragement may be preserved in full availableness.

This gift, though small, is designed as an expression of my interest in my "Alma Mater."

I wish the fund to bear the name of the "Hodges Scholarship."

I do not wish that this donation should be promulgated until after my decease.

(Signed) R. M. Hodges.

Cambridge, Feb. 20, 1878.

Signed by the donor, at this date, in the presence of the subscriber, requested by the donor to be a witness of his act, and of the fidelity thereof.

(Signed) A. P. Peabody.

A suggestion and form, or some paper of like nature, to be carried into effect, if thought appropriate or expedient.

Harvard College.

I have this day received from the "Hodges Scholarship," as a testimonial of my appreciation of the mental and moral culture bestowed by Harvard College, $ ——.

Although this beneficence is unconditional, I hereby signify my desire and intention, if I should be pecuniarily prosperous in life, to refund, in part or fully, to the above-named scholarship, the benefaction awarded me.

VI.

EXAMINATIONS FOR WOMEN.

To the Faculty of Harvard College: —

The Committee of the Faculty, appointed to take charge of the Examinations for women, have the honor to present their second report as follows: —

The examinations have now been held for five years, and as the increase in the number of candidates in the last two years indicates that the experiment is entering upon a new stage, it seems expedient at this point to present a statement of all that has been done thus far, whether previously reported upon or not. The Committee have therefore prepared a tabular statement, which will be found appended to this report, giving such facts with respect to every candidate examined thus far as can be given without the publication of names. The statement will be found to give the age of every candidate, some general description as to the circumstances of her preparation, the choice of studies made by her so far as election is allowed by the scheme, and the results of her trial. It will be seen that the total number of candidates at the preliminary examination, deducting for those examined more than once, has been seventy-nine. Of these, nineteen have passed in all the subjects, and have received certificates accordingly; seven have been rejected for failure in a considerable part of the subjects; five, not rejected, will be allowed certificates upon passing in certain subjects in which they have been found deficient; thirty-five, under a recent regulation, having offered and passed a part of the subjects, are allowed to complete their examination at a future time; and sixteen, having failed to pass upon a sufficient number of subjects thus offered, have received no credit. Six candidates have passed the advanced examinations, and received certificates therefor; three in languages, one in languages and history, one in philosophy, and one in mathematics. Of these candidates, two have passed with distinction; one in modern languages, and one in the classics.

In the course of the five years, the Committee have had occasion to consider carefully the course of study originally laid down by the Faculty for the preliminary examination. On the one hand, it has been urged upon them that a reduction in the number of subjects required, and a wide range of choice, would have for its immediate result an increase in the number of candidates, and the extension of the influence of the examinations; on the other hand, they have often been advised that various studies not now required are of such importance as to merit a place upon the scheme of preparation. The Committee have not felt disposed, however, to recommend a departure from the line of policy originally laid down by the Faculty. They early found that the real influence of the examinations was not measured by the number of candidates presenting themselves, and that it would not be advanced by reducing the standard of attainment required, and the worth of the certificates given to those who pass. They also found the demands, both mental and physical, made upon the candidates at the time of examination so serious, as to make it desirable to shorten the period if possible, and to make any increase in the number of subjects impracticable.

But while for these reasons the general scheme of preparation for the preliminary examination has remained without change, one or two important modifications of detail have been made, with an important influence on its working. Beginning with the year 1877, permission was given for any candidate to divide the examination between two years, provided she should pass in not less than three subjects in the first year, and should attain on the whole a somewhat higher percentage than the minimum required when the whole examination is taken in one year. This method, — which was adopted upon the advice of the ladies most interested in the examinations, and is that which has been applied with great success for some years in the examinations for admission to college,— materially lightened the burden of preparation, and enabled the candidates to adjust almost at pleasure the strain of the actual examination, without any lowering of the standard of actual attainment. To its adoption is no doubt due, in part, the marked increase in the number of candidates in 1877 and 1878. A certain number of candidates will no doubt always be found desirous of examination upon all the subjects at once; but it appears from two years' trial that the majority prefer to divide the examination, and might even be prevented from presenting themselves at all by a demand for passing the whole in the same year. It was also determined, in response to representations made by a committee of ladies in Cincinnati, that after 1877 German should be allowed as a substitute for French. This modification was believed to be of some possible future importance, as in several cities in which a warm interest is taken in the experiment the facilities for learning German are exceptionally good, while the language itself holds a place in the general system of education little if at all inferior to that of French.

The Committee were notified in 1877, by the Ladies' local committee in New York, that several candidates desired to present themselves in that city. An examination was accordingly held there, simultaneously with that in Cambridge, under the superintendence of Professor Child, who also conducted the second examination in New York in 1878. In compliance with similar notifications from the respective local committees, an examination was also held in Philadelphia under the charge of Professor Lovering, and one in Cincinnati under the charge of Mr. W. G. Hale, in 1878. All of these examinations were strictly simultaneous with those held in Cambridge, using the same papers of questions and the same printed time-table; and the books at the close were collected in Cambridge and given to the examiners in each subject, to be read and marked by them upon a single scale. In all cases, the aim has been to have the examinations conducted under the same safeguards with those held in college, and with the same guarantee for their purity and fairness.

In passing upon the results, when candidates have presented themselves for the whole examination at once, the rules laid down by the Committee at the start were as follows: —

> "I. To require a minimum of 40 per cent upon every subject, counting as a subject the work of any morning or afternoon.
>
> "II. To require a minimum average of 50 per cent upon the whole work of the examination.
>
> "III. To reject any candidate falling below the minimum in more than two subjects.
>
> "IV. To suspend action in the case of any candidate falling below the minimum in any subject. but not rejected under rules II. or III., until she should pass satisfactorily in that subject at some future examination."

The percentages named as the minimum in I. and II. were raised in 1878 to 50 and 60 respectively; but in other respects the rules above given have been followed, with only such small deviation as substantial justice appeared to demand in two or three exceptional cases. It is believed, however, that some revision of the rules is now needed, in order to assign to the different subjects covered by the examination a more just proportional weight in determining the result than is done at present. It will be advisable at the same time to settle, with more precision than has yet been necessary, the rules applicable in the case of candidates who divide the examination between two years.

The time occupied by the examinations, — namely, five hours per day for six working days, — has been much considered by the Committee; but they have not been able to effect any thing towards its reduction, except a condensation of the mathematical subjects into two papers, covering the same ground with the three papers originally contemplated. The importance of this question of time is greatly diminished, however, by the arrangement for the division of the examination between two years.

The Committee do not feel that the time has come for expressing an opinion as to the ultimate success of this system of examinations, even if it were their duty to do so. It was understood, when the Faculty consented to supply in this manner a declared want in the means of female education, that the experiment, in order to be conclusive, must needs be a long one. The important stage of its progress for purposes of observation properly begins with the marked increase of numbers in the fourth and fifth years of the trial, and a much more extended range of experience will be needed for any fair conclusion as to the direct effects of the examinations. As to the indirect effects of the system, however, the Committee have to report that its usefulness has been proved earlier than could have been expected, and in many ways. For the whole five years a strong interest has been manifested in the subject among persons interested or engaged in female education, and has found expression in inquiries coming from every State in the Union. This interest, there is ground for believing, has had an important influence in the improvement of schools, by creating new wants and new objects of ambition and of effort among both teachers and pupils. In many cases, courses of instruction have been adapted to the lines of study marked out by the Faculty, teachers have found a valuable stimulus for their pupils in the existence of a recognized exterior standard, and have found their hands strengthened in their efforts to give a proper direction to the work of their pupils. There has been a demand from all parts of the country for the statement of requisitions and the papers of questions published for the use of the local committees. This demand does not appear to have been the result merely of an easily satisfied curiosity. It continues and increases, and affords sufficient evidence that the system of examinations, which in some respects is still on its trial, is at the same time performing valuable public service.

This report is respectfully submitted, on behalf of the Committee, by

CHARLES F. DUNBAR, *Chairman.*

CAMBRIDGE, January 1, 1879.

CANDIDATES

AT THE PRELIMINARY EXAMINATIONS FOR WOMEN, 1874–78.

NOTE. — In the following table, the letter G. shows that a subject was passed with a mark of 90 per cent or more; P., that it was passed, but with a mark lower than 90 per cent; *f.*, that the candidate failed to pass in that subject; ?, that she failed in a part of the subject. Cases in which the decision is "one condition," and the like, are cases under the fourth of the rules stated in the report. "Credit for ——" means that the candidate divides the examination and has passed in the number of subjects stated.

Time and place of examination.	Number.	Age.	Schools attended.	How prepared for this examination.	Does she expect to teach?	Subjects and Results.												Decision.
						English.	French.	German.	Greek.	Latin.	Arithmetic.	Algebra.	Geometry.	Physics.	Botany.	Phys. Geog.	History.	
1874.																		
Boston.	1	18½	Private schools.	By herself.	No.	G.	P.	P.			G.	P.	G.	P.		P.	P.	Certificate.
"	2	19	—— High School.	By herself.	Yes.	P.	P.			P.	G.	P.	*f.*	*f.*		P.	P.	2 conditions.
"	3	20	—— High School and Mr ——'s school.	By herself.	No.	P.	P.	P.			P.	P.	P.	P.		P.	P.	Certificate.
"	4	20½	—— High School.	By Mr. ——.	No.	P.	P.			P.	G.	G.	P.	P.		P.	P.	Certificate.
"	5	19	—— University.	W. —— University.	Yes.	P.	P.	P.			*f.*	*f.*	*f.*	P.		P.	P.	3 conditions.
"	6	19	—— High School.	By herself.	Yes.	P.	P.			P.	P.	P.	*f.*	*f.*		*f.*	P.	Rejected.
"	7	21	—— High School and —— Training Sch'l	By herself.	Teaches.	G.	P.		P.		P.	P.	P.	P.		P.	P.	Certificate.
1875.																		
Cambridge.	[2]												P.	P.				Certificate.
"	8	18	—— Seminary.	Had a teacher in languages only.	Possibly.	*f.*	*f*	*f.*			*f.*	*f.*	*f.*		P.	P.	P.	Rejected.
"	9	19	Public schools.	By herself.	Yes.	*f.*	?			P.	P.	P.	P.		P.	P.	P.	2 conditions.
"	10	20	Public schools.	By herself.	Yes.	*f.*	*f*			P.	P.	*f.*	P.	P.		P.	P.	Rejected.
"	11	21	—— High School.	By herself.	Yes.	P.	P.	P.			P.	P.	P.	P.		P.	P.	Certificate.
1876.																		
Cambridge.	[9]					P.	P.											Certificate.
"	12		Had tried before.	See No. 8.		P.	*f.*	P.			P.	*f.*	P.		P.	P.	*f.*	Rejected.
"	13	19	Private schools.	Teacher in Mathematics only.	Yes.	P.	G.	G.			P.	P.	P.		G.	P.	P.	Certificate.
"	14	18	B. and G. Academies.	B. Academy.	Yes.	*f.*	P.			P.	P.	*f.*	P.	*f.*		P.	*f.*	Rejected.
"	15	19	B. and G. Academies.	B. Academy.	Possibly.	*f.*	P.			*f.*	P.	*f.*	*f.*	*f.*		P.	*f.*	Rejected.
"	16	19	Miss H.'s school.	By Mr. H.	No.	P.	G.	G.			G.	P.	P.	P.		P.	G.	Certificate.

1877.																		
Cambridge.	17	26	Miss ——'s school.	Private teachers.	No.	G.	G.	P.			P.				G.		P.	Credit for 6.
„	18	20	Private schools.			P.	P.	P.			P.	P.	f.		P.	P.	P.	1 condition.
„	19		Had tried before.	See No. 14.		P.	P.			P.	P.	P.	P.	P.		P.	P.	Certificate.
„	20	22½	Private schools.	Miss B.'s school.	Yes.	G.					P.	P.	f.		P.	P.	G.	Credit for 6.
„	21		Had tried before.	See No. 10.		P.	f.			f.	f.	f.	f.	P.		f.	P.	Rejected.
„	22	19	Private schools.	Mrs. ——'s school.	No.		G.	G.			f.	P.					P.	Credit for 4.
New York.	23	39	—— Academy.	By herself.	Teaches.	P.					G.	G.	G.	G.				Credit for 5.
„	24	23	S. College.	By Mr. ——.	Yes.	P.	?			P.	P.	G.	f.		G.	P.	P.	2 conditions.
„	25	18	Private schools.	Prof. ——.		P.	P.			P.	P.	P.	P.	P.		P.	P.	Certificate.
„	26	39	Public schools.	By herself.	Teaches.	P.	P.	P.			f.	P.						Credit for 4.
„	27	18	—— Institute.	St. ——'s Hall.	No	P.	P.			P.							P.	Credit for 4.
„	28	18	At home.	Teacher only in French.	Possibly.		P.				P.	P.	P.					Credit for 4.
„	29	35	—— Seminary.	By herself.	Yes.						P.	P.	P.		G.	P.		Credit for 5.
„	30	16	Private school.	Private school.	No.	P.	G.	G.									P.	Credit for 4.
„	31	18	Rev. Mr. ——'s school.		No.	P.	f.	P.									f.	No credit.
„	32	20¾	Mrs. ——'s school.	Teacher in French only.	No.		f.				f.					P.	P.	No credit.
„	33	21	—— Normal College.	By herself.	Yes.						P.	G	P.			P.		Credit for 4.
„	34	19	—— Institute.	By herself.	Yes.						P.	G.	P.	P.		P.		Credit for 5.
„	35	40	—— Seminary.	By herself.	Teaches.	G.	G.			P.	P.	G.	P.		P.	P.	P.	Certificate.
„	36	19	Miss ——'s school.	Private teachers.	No.	P.	G.	P.									P.	Credit for 4.
„	37	18	Dr. ——'s school.		Yes.	P.	f.			P.							P.	Credit for 3.
„	38	21	—— Normal College.	By herself.	Yes.						P.	G.	P.			G.		Credit for 4.
„	39	28	—— Seminary.		Teaches.	P.		G.				f.					P.	Credit for 3.
„	40	17	At home.	Teacher in French only.	Possibly.		P.				f.	f.	P.					No credit.
1878.																		
Cambridge.	[17]											P.	P.			P.		Certificate.
„	[18]										G.		P.					Certificate.
„	41	18	—— High School.	Miss ——'s school.	No.	P.				P.	G.	G.	P.					Credit for 5.
„	42	20	Private schools.	Private teacher.	Yes.	P.	P.			f.	P.		f.		f.	P.	f.	Credit for 4.
„	43	19	—— High School and Miss ——'s.	By herself.	Yes.	P.	G.	G.			P.	P.	P.	P.		P.	P.	Certificate.
„	44	19	Private school.	Mrs. ——'s school.	No.	f.	G.			f.			f.			f.		No credit.
„	45	19	Private schools.	Mrs. ——'s school.	No.	P.	G.			P.					P.		P.	Credit for 5.
„	46	20½	—— High School and Mr. ——'s school.	Mr. ——'s school.	No.	P.	P.				P.	P.						Credit for 4.
„	47	20	—— High School.		Yes.						P.	f.	f.			P.		No credit.
„	48	22	—— Normal Acad.	Mr. ——.	Yes.	P.	P.			P.	P.	f.	f.	P.		f.	P.	3 conditions.
„	[22]					P.					f.		f.		P.	f.		Credit only as in 1877.
New York.	49	21½	Private schools.		No.						f.	f.	P.					No credit.
„	50	19	Private schools.	Miss ——'s school.		P.	P.	P.			f.							Credit for 3.
„	51	17	Public and private schools.	Miss ——'s school.	No.	f.		f.			f.	f.					f.	No credit.
„	52	24	Private schools.	Prof. ——, in Greek only.	No.	G.	P.		P.								P.	Credit for 4.

CANDIDATES AT THE PRELIMINARY EXAMINATIONS FOR WOMEN — *Continued.*

New York.	[26]										P.		P.	P.		P.	P.	Certificate.
"	[27]										P.	P.	P.	P.		P.		Certificate.
"	53	19	—— Seminary.	Mr. ——, in Mathematics only.	No.	G.	G.					*f.*				P.		Credit for 3.
"	54	18	—— School and —— College.	—— College.								*f.*			P.			Exam. broken off by illness.
"	55	18	—— School and —— College.	—— College.			*f.*			P.		*f.*	*f.*					No credit.
"	56	24	Mr. ——'s school.	Private teacher.		P.	P.	P.			G.	P.	P.	P.		*f.*	P.	1 condition.
"	57	22	—— Seminary and Miss ——'s school.	By herself.	Undecid'd	P.	P.	P.			P.	P.	P.		P.	P.	P.	Certificate.
"	58	19½	Private schools.	Miss ——'s school.	No.	P.	P.			P.	P.	*f.*					P.	Credit for 5.
"	59	24	Private schools.	Prof. ——, in Greek only.	No.	P.	P.		P.								P.	Credit for 4.
"	60	16	Private school.	Miss ——'s school.	No.	*f.*		*f.*			*f.*	*f.*					*f.*	No credit.
"	61		Tried before.	See No. 40.			*f.*				*f.*	*f.*	*f.*			*f.*		No credit.
"	62	24	—— Seminary.	By herself.	Yes.	P.					G.	P.	*f.*			*f.*		Credit for 3.
Philadelphia.	63	30	Public schools.	Teachers only in French and German.	Teaches.	P.	P.			P.	P.	G.	P.		P.	*f.*	P.	1 condition.
"	[24]						P.						P.					Certificate.
"	64	19	Private school.	By herself.	No.	P.					*f.*					P.		No credit.
"	65	22	Private school.	By herself.	Teaches.	P.					P.			P.		P.	G.	Credit for 5.
"	66	32	—— Normal School.	By herself.	Teaches.	P.	P.				P.		P.			P.	G.	Credit for 6.
"	67	21½	Private schools.	Prof. —— and Miss ——.	No.	P.	P.			*f.*	P.	*f.*	*f.*	P.		P.	P.	3 conditions.
"	68	19½	—— Institute.	Private instructors.	No.	P.	P.			P.	P.	*f.*	P.					Credit for 5.
"	69	30	Private school.	Private instructors.	Possibly.				G.		P.	P.	G.					Credit for 4.
"	70	19	Private schools.	Mrs ——.	No.	P.					*f.*	*f.*	*f.*					No credit.
"	71	39	O. College.	By herself.	Teaches.		P.			P.	P.	*f.*	*f.*					Credit for 3.
"	72	25	S. College.	Prof. ——.	Yes.	P.	P.	G.				*f.*						Credit for 3.
"	73	23	Private schools.	Teacher in French only.	No.		P.				*f.*		*f.*					No credit.
"	74	18½	—— Seminary.	St. ——'s Hall.	Yes.	*f.*	G.				*f.*	*f.*		*f.*		*f.*	P.	No credit.
"	75	18	Private school.	Prof. ——.	No.	*f.*					*f.*	*f.*		*f.*			*f.*	No credit.
"	76	18	Private school.	Private school.	Yes.						P		P.	P.		*f.*		Credit for 3.
"	77	25	Private school.		Yes.	P.	P.				*f.*					*f.*		No credit.
"	78	20	Private schools.	Prof. ——.	Yes.	P.	P.			P.	*f.*		*f.*	*f.*		P.	P.	Credit for 5.
Cincinnati.	79	27	—— High School.		No.	P.					*f.*	P.	P.		P.			Credit for 4.
"	80	20	Public and private school.	Miss ——'s school.	Yes.						P.	P.	P.			*f.*		Credit for 3.
"	81	20	—— College.	Miss ——'s school.	Yes.		P.				P.		P.					Credit for 3.
"	82	20	Private schools.	Miss ——'s school.	Yes.		G.	P.			P.		P.					Credit for 4.
"	83	22	—— High School.		Yes.	P.				P.	P.	P.	G.			P.		Credit for 6.

CANDIDATES

At the Advanced Examinations for Women, 1875–78.

Time and place of examination.	Candidate's No. at her Prel. Exam.	Section.	Subjects.	Results.	Decision.
1875. Cambridge.	1	Languages.	German. Italian.	G. P., and in part G.	Certificate, "with distinction."
"	4	Languages. History.	English. Latin. Reformation.	P. P. P.	Certificate.
"	7	Languages.	Greek. Latin.	P. P.	Certificate.
1878. Philadelphia.	24	Mathematics.	Solid Geom. Algebra. Log and Pl. Trigonometry. Sph Trigonometry. Astronomy.	P. P. G. P. P.	Certificate.
"	25	Languages.	Greek. Latin.	G. P., and in part G.	Certificate, "with distinction."
"	35	Philosophy.	Logic. Rhetoric. Pol. Economy.	P. P. P.	Certificate.

VII.

SUMMARY OF STUDENTS IN THE UNIVERSITY AT THE BEGINNING OF THE ACADEMIC YEAR 1877-78.

College,		
Seniors	168	
Juniors	208	
Sophomores	198	
Freshmen	239	
		813
Unmatriculated Students		13
Lawrence Scientific School		22
Bussey Institution		3
Dental School		17
Medical School		212
Law School		189
Divinity School		21
Candidates for the Degrees of A.M., Ph.D., and S.D.		51
Holders of Fellowships		6
Resident Graduates not Candidates for Degrees		8
		1355
Deduct for names inserted more than once		11
		1344

Persons who attended the Summer Courses in Science in 1878.

Chemistry	20	
Botany	27	
Geology	8	
	—	55
Deduct for names inserted more than once		4
		51

Number of Certificates issued to Women in 1878.

Preliminary Examination	7
Advanced Examination	3

VIII.

ACADEMIC HONORS FOR THE YEAR 1877–78.

COMMENCEMENT, JUNE 26, 1878.

Samuel Shepherd,	An Oration.
Edgar Hamilton Nichols,	Do.
Herman Frank Vickery,	Do.
Paul Shorey,	Do.
William Zebina Bennett,	A Dissertation.
George Miller Pinney,	Do.
Charles Frederic Chamberlayne,	Do.
Clinton William Lucas,	Do.
Benjamin Newhall Johnson,	A Disquisition.
Willis Boyd Allen,	Do.
Rosewell Bigelow Lawrence,	Do.
William Sullivan,	Do.
Herbert Channing Burdett,	Do.
Charles Albert Hamilton,	Do.
George Locke Cheney,	Do.
George Hermon Stearns,	Do.
George Henry Browne,	Do.
Irving Elting,	Do.
Eugene Tyler Chamberlain,	Do.
George Halsey Perley,	Do.
Henry Goldmark,	Do.
Charles Chauncey Binney,	Do.
Barney Sachs,	An Essay.
Herbert Weir Smyth,	Do.
Andrew Duff Heffern,	Do.
Henry Sylvester Nash,	Do.

HONORS AT GRADUATION.

1878.

In Classics.

Paul Shorey,	Highest Honors.
George Henry Browne,	Honors.
Edward Browne Hunt,	Do.
George Hermon Stearns,	Do.

In Philosophy.

Andrew Duff Heffern,	Highest Honors.
Benjamin Newhall Johnson,	Do.
Paul Shorey,	Do.
Eugene Tyler Chamberlain,	Honors.
Irving Elting,	Do.
Alfred Harrison Rogers,	Do.

In History.

Edward Perkins Channing,	Honors.
Paul Shorey,	Do.

In Physics.

Henry Goldmark,	Highest Honors.

In Chemistry.

William Zebina Bennett,	Highest Honors.
Herbert Channing Burdett,	Honors.

In Natural History.

Barney Sachs,	Honors.

SECOND-YEAR HONORS.

In Classics.

Edward Southworth Hawes,	Sophomore,	Highest Honors.
Anton Leister,	Do.	Do.
Edward Herbert Atherton,	Junior,	Honors.
George Todd Coverly,	Do.	Do.
John Whitney Dalzell,	Do.	Do.
George Lyman Dolloff,	Do.	Do.
John Joseph Townsend,	Do.	Do.
Frederick Hobbs Allen,	Sophomore,	Honors.
Frederic Almy,	Do.	Do.
William Shankland Andrews,	Do.	Do.
Charles Edward Atwood,	Do.	Do.
Henry Cutler Baldwin,	Do.	Do.

Sherard Billings,	Sophomore,	Honors.
Charles Wesley Bradley,	Do.	Do.
Walter Cole,	Do.	Do.
Harold North Fowler,	Do.	Do.
William Henry Hills,	Do.	Do.
Henry Champion Jones,	Do.	Do.
Thaddeus Davis Kenneson,	Do.	Do.
Arthur Henry Lea,	Do.	Do.
Arthur Wendell Moors,	Do.	Do.
John Aloysius O'Keefe,	Do.	Do.
William George Pellew,	Do.	Do.
Josiah Quincy,	Do.	Do.
Howard Townsend,	Do.	Do.
Frederic Allison Tupper,	Do.	Do.
Albert Barnes Weimer,	Do.	Do.
Herbert Eveleth Greene,	Freshman,	Honors.

In Mathematics.

Arthur Hale,	Sophomore,	Highest Honors.
Charles Austin Hobbs,	Do.	Do.
Herbert Mills Perry,	Do.	Do.
Frank Lindsay Crawford,	Junior,	Honors.
James Brainerd Field,	Sophomore,	Honors.

IX.

PRIZES.

DETURS.

THE following students received books, called "Deturs," from the foundation of Edward Hopkins, for excellence in scholarship: —

Juniors of 1877-78.

George Faunce,
William Badger Lawrence.

Sophomores of 1877-78.

Anton Leister,
William George Pellew,
Josiah Quincy.

Freshmen of 1877-78.

William Henry Coolidge,
Frederic Joaquim Barbosa Cordeiro,
George Washington Dickerman,
Richard Edwards,
Farley Brewer Goddard,
Curtis Guild,
James Robbins Howe,
Edwin Cull Howell,

Arthur Orcutt Jameson,
John Norton Johnson,
Henry Olmstead Jones,
Gardiner Martin Lane,
William Coolidge Lane,
James Bettner Ludlow,
Harry Leverett Nelson,
John William O'Callaghan,
James Parker Parmenter,
Boies Penrose,
Charles Bingham Penrose,
Edward Lothrop Rand,
Arthur Wellington Roberts,
Joel Herbert Seaverns,
John Wallace Suter,
George Phineas Upham,
Winthrop Howland Wade,
Edmund Allen Whitman,
William Loring Worcester,
Merle St. Croix Wright.

Bowdoin Prizes.

Jesse Walter Fewkes, of the Class of 1875,
Robert Holliston Worthington, of the Class of 1877,
William Bancroft Hill, of the Class of 1879,
Webster Kelley, of the Class of 1879,
Henry Watmouth Montague, of the Class of 1878,
Barney Sachs, of the Class of 1878,
Bayard Tuckerman, of the Class of 1878.

Boylston Prizes for Elocution.

First Prize.

Edward Robinson, of the Class of 1879.

Second Prizes.

Frank Donaldson, of the Class of 1879,
Henry Osborn Taylor, of the Class of 1878,
Charles Henry Vinton, of the Class of 1878.

Lee Prizes for Reading.

Sophomores.

Curtis Guild,
John Prescott Farnsworth,
Fred S G Reed,
Harry Ellison Seaver,
Edmund Allen Whitman.

Freshmen.

Clifton Hill Lord, from the Newton High School,
Burton Munroe Firman, from Phillips Academy, Andover,
Henry Winthrop Hardon, from the Newton High School,
William Hobbs Manning, from the Roxbury Latin School,
Samuel Williston, from the Cambridge High School.

X.

DEGREES.

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Bachelors of Divinity	4
Bachelors of Laws	47
Bachelors of Laws of Former Classes	2
Doctors of Medicine	47
Doctors of Dental Medicine	7
Bachelors of Science	5
Doctors of Science	3
Doctors of Philosophy	4
Masters of Arts	13

HONORARY DEGREES.

Master of Arts.

George Leib Harrison, of Philadelphia.

Doctors of Laws.

William Goodwin Russell, Counsellor at Law.
Nathan Clifford, Justice of the United States Supreme Court.
Thomas Chase, President of Haverford College.
Frederick Temple Blackwood, Earl of Dufferin, Governor-General of Canada.

XI.

COMMITTEES OF THE OVERSEERS, FOR 1878.

To visit the University.

President of the Board of Overseers.
His Excellency the Governor.
His Honor the Lieutenant-Governor.
The President of the Senate.
The Speaker of the House of Representatives.
The Secretary of the Board of Education.
The Secretary of the Board of Overseers.
The Chairman of each of the Visiting Committees.

To visit the Academical Department.

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Rev. Edwards A. Park, D.D.
Rev. John O. Means, D.D.
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Rev. Francis G. Peabody.
Rev. Rollin H. Neale, D.D.
Rev. A. B. Muzzey.
Rev. Franklin Johnson, D.D.
Rev. Alexander McKenzie.
Rev. Phillips Brooks, D.D.
Rev. Seth Sweetser, D.D.
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Gen. Alfred P. Rockwell.
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Samuel H. Scudder, Esq.
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Frederic Winsor, M.D.

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HARVARD COLLEGE.

TREASURER'S STATEMENT.

1878.

TREASURER'S STATEMENT.

To the Board of Overseers of Harvard College:—

The Treasurer of the College submits the Annual Statement of the financial affairs of the University, for the year ending August 31, 1878, in the usual form.

During the year a mortgage of $75,000, which was upon the Andrews Estate at the time of its purchase for the College, has been paid off, and that sum has been added to the valuation of the estate upon the College books. The account of advances for the Library extension was closed on May 31, 1878, interest to that date amounting to $3,801.45 being charged to the University account, and principal amounting to $89,012.68 being taken from the Insurance and Guaranty Fund.

The Funds separately invested are as follows: —

	Principal.	Income.
UNIVERSITY.		
Graduates' Scholarship (part of),		
$20,000, Providence City Bonds, valued at . . .	$21,000.00	1,011.25
Leonard Jarvis Fund (part of),		
Real Estate in Baltimore, ...	11,800.00	665.00
COLLEGE.		
Bowditch Scholarships (part of),		
$70,000, Massachusetts 5% Bonds, ...	70,000.00	3,554.68
Shattuck Scholarships (part of),		
20 shares Cocheco Manufacturing Co. Stock, . .	6,512.50	700.00
Bassett Scholarships (part of),		
Mortgage, ...	5,000.00	275.00
Pennoyer Scholarships (part of),		
Pennoyer Annuity in England, ...	4,444.44	286.08
Rumford Professorship (part of),		
French Rentes, ...	10,000.00	605.36
Amounts carried forward, . . .	$128,756.94	$7,097.37

Amounts brought forward,	$128,756.94	$7,097.37
Jonathan Phillips Fund,		
Mortgage,	10,000.00	700.00
Daniel H. Peirce Fund (part of),		
Mortgage,	12,375.62	466.14
Samuel Ward's Gift,		
Ward's (Bumkin) Island, Boston Harbor,	1,200.00	50.00
Botanic Garden Fund (part of),		
$17,000 New York Central R. R. Bonds,	17,000.00	1,020.00
Herbarium Fund (part of),		
$12,000, Ionia & Lansing R. R. Bonds,	11,520.00	960.00
LIBRARY.		
Charles Minot Fund (part of),		
$60,000, Buffalo, Bradford, & Pittsb. R. R. Bonds,	60,000.00	4,200.00
Ichabod Tucker Fund (part of),		
Policy of Mass. Hospital Life Insurance Co.,	5,000.00	250.00
Charles Sumner Fund (part of),		
36 shares St. Paul & Duluth R. R. Stock,	1,200.00	none.
1 share New England Glass Co. Stock,	325.00	none.
Bank taxes refunded,		49.07
MEDICAL SCHOOL.		
George C. Shattuck Fund (part of),		
7 shares Stark Mills Co. Stock,	7,000.00	210.00
DIVINITY SCHOOL.		
Adams Ayer Fund,		
$1,000, European & North American R. R. Bond,	1,000.00	none.
SCIENTIFIC SCHOOL.		
James Lawrence Fund,		
$50,000, United States 6% Bonds,	50,000.00	3,044.95
John B. Barringer Fund (part of),		
40 shares Schenectady Bank Stock,	2,200.00	200.00
MUSEUM OF COMPARATIVE ZOÖLOGY.		
Gray Fund for Museum,		
Mortgage,	50,000.00	2,070.84
Sturgis Hooper Fund (part of),		
$20,000, Erie Basin Dock and Warehouse Bonds,	20,000.00	1,400.00
Agassiz Memorial Fund (part of),		
$10,000, Summit Branch R. R. Bonds,	10,000.00	700.00
Chicago Debt Certificate,	6,000.00	985.83
OBSERVATORY.		
Anonymous gift (now used to pay annuities),		
$1,000, Michigan South'n & No. Indiana R.R. Bond,	1,000.00	70.00
$2,000, Cincinnati Municipal Bonds,	2,000.00	140.00
$2,000 Minneapolis Municipal Bonds,	2,000.00	160.00
50 shares Pittsburg, Fort Wayne, & Chicago, R. R. Stock,	5,000.00	350.00
Amounts carried forward,	$403,577.56	$24.124.20

Amounts brought forward, . .	$403,577.56	$24,124.20
SPECIAL FUNDS.		
Bussey Trust,		
Real Estate, ...	413,092.80	24,551.04
Gray Fund for Engravings (part of),		
$15,450, United States 6% Bonds, ...	15,000.00	940.91
	$831,670.36	$49,616.15

The other Funds of the College are invested as a whole. These investments, with the income thereof, are as follows:

Investments.	Principal, September 1, 1877.	Principal, August 31, 1878.	Income.
Notes, Mortgages, &c., ...	$849,378.74	$734,634.03	$47,109.68
Railroad Bonds, ...	342,426.06	338,760.00	22,152.20
Railroad Stock, ...	75,719.37	75,719.37	5,439.00
United States 6% Bonds, ...	71,509.42	136,624.42	4,948.81
Massachusetts "	49,950.00	49,950.00	2,289.04
Municipal "	75,440.00	75,440.00	4,320.00
New Boston Coal Mining Co. Bonds,	9,000.00	9,000.00	700.00
Bank Stock, ...	63,964.00	63,964.00	4,714.57
Manufacturing Stock, ...	99,658.29	99,658.29	7,230.00
Real Estate, ...	827,511.30	902,511.30	55,737.22
Unoccupied Lands, ...	106,887.49	106,887.49	
Brattle Street Reversion, ...	1,000.00	1,000.00	
Advances to Scientific School, . . .	9,220.32	8,288.69	553.22
" " Dental School, ...	14,319.60	16,564.84	859.18
" " Bussey Trust, ...	40,082.13	40,082.13	2,404.93
" " Observatory, ...		749.67	
" " Library extension, . . .	70,633.25		3,801.45
" " Dining Hall Association,	48,069.66	41,900.91	2,799.53
" for altering Appleton Chapel,	2,859.62	2,859.62	
" " repairing College Wharf,	1,736.85	1,438.43	121.58
" " books, ...	505.30		
Term Bills not collected August 31, .	63,751.57	68,387.30	
Baring Brothers & Co., ...	4,961.38	1,678.59	
Cash in Suffolk National Bank, .	15,255.78	4,415.82	
Cash in hands of Bursar, ...	472.11	3,353.61	
Totals of general investments,	2,839,312.24	2,783,868.51	165,180.41
Totals of special investments,	839,282.86	831,670.36	49,616.15
Amounts of Funds, . . .	$3,678,595.10	$3,615,538.87	$214,796.56

The net income of these general investments ($165,180.41) has been divided at the rate of 5$\frac{86}{100}$ per cent among the Funds which they represent. The balance of $48.13 has been placed to the credit of the University account.

The rate of income this year as compared with that for 1876–77 shows a falling off of $\frac{35}{100}$ of one per cent, the result of lessened dividends from stocks, lower rates of interest on renewal of notes and mortgages, and smaller net returns from real estate. From the large gross rent of the Webb Estate has been taken during the year the cost of repairs and improvements on that estate amounting to nearly eight thousand dollars. This outlay, as well as a reduction of rent, was necessary in order to retain Messrs. Little, Brown & Co. as tenants for another term of years. From the gross rent of the Andrews Estate has been taken $2100 to pay part of the cost of improvements made by the tenants of that estate. During the year both of these estates were yielding, under the old leases, much higher rents than could now be got for them, and the Corporation did not think it prudent to charge the capital accounts with the cost of improvements called for by the strong competition with newer buildings.

Until there shall be larger profits in general business, with a better demand for money and for stores, the causes which have already reduced the rate of income must gradually reduce it still further. For the year 1878–79 the rate of income from the "general investments" is not likely to exceed five and one half per cent, and some unlooked for misfortune may easily carry it lower.

The following table shows the income available for the departments dependent upon the College proper, and the expenditures in those departments: —

Interest on funds for		
University Salaries and Expenses,	$24,955.41	
College Expenses,	1,945.90	
Library,	1,080.60	
College Salaries,	29,667.22	
Gymnasium, and repairs on College buildings,	none.	
Cash received from undergraduates,	157,864.07	
Sundry cash receipts,	3,176.61	
Surplus reserved from last year,	65.28	218,755.09
Expended for		
University Salaries and Expenses,	$33,028.50	
College Expenses,	34,795.71	
Library Salaries and Expenses (not books),	23,586.60	
Gymnasium Salaries and Expenses,	1,588.49	
College Salaries,	126,048.18	
Repairs to Coll. Build'gs not valued on Treas.'s books,	6,082.26	225,129.74
Balance showing deficit for the year, which has been charged off to Stock account,		$6,374.65

In the University and College accounts a large net reduction of expenses has fully covered the loss of income, but the Library has caused the deficit of $6,374.65, by a great increase in its expenditure. This increase is the result of recent changes in the Library, and, while part of it is only temporary, the Library must always hereafter cost more than when it was smaller and doing less work. Very large purchases of books also have been made during the year, and the accumulated income of the book funds has been mostly spent.

The permanent loss of income from capital expended on the Library extension, of at least $5000 a year, and the permanent increase of current expenditure, not including the purchase of books, make a new burden on the free income of the College equal to quite $8000 a year. As nearly all gifts to the Library hitherto have been for the purchase of books, the increasing cost of maintenance falls almost wholly upon the unrestricted income of the College, already insufficient for the demands upon it. During the year 1878–79 considerable reductions will be made in the University, College, and Library expenses, and thereby, with the aid of new income from the $20,000 of the Sever Fund and from the $20,000 recently added to the Class Subscription Fund, the Corporation hope to avoid another deficit. The Corporation have decided for the present not to make any general reduction in salaries of College officers.

In the Divinity School an expenditure for salaries greater than in the preceding year, and a diminished income leave a deficit of $3,857.19, which has been taken from the unrestricted funds of the School. For 1876–77 there was a deficit of $725.57.

The Law School has made a surplus of $1,266.74, in spite of a falling off in the fees from students and a considerable increase in expenditure for salaries. In 1876–77 there was a surplus of $5,365.92.

The Medical School has made a surplus of $3,603.61, notwithstanding a loss of income from students and a large increase in salaries and general expenses. In 1876–77 there was a surplus of $14,125.01.

In the Dental School, a heavy falling off in tuition fees leaves a deficit of $2,245.24, notwithstanding some saving in expenses. The deficit again increases the debt of the Dental School. In 1876–77 there was a deficit of $1,703.14.

In the Lawrence Scientific School, decrease of expenses, as well as decrease of income from students and from property, gives a surplus of $931.63, which has gone to reduce the debt of the departments of Engineering and Chemistry. In 1876–77 also the debt was reduced by a surplus of $1,588.64. Mr. Alexander Agassiz has again this year enabled the Museum of Comparative Zoölogy to add to its building fund from the income of the Agassiz Memorial Fund, and he has from the building fund with the aid of personal advances nearly finished a large addition to the Museum building. During the year a change of investment for the Gray Fund for the Museum was made necessary by the maturing of its old mortgage, and a lessened rate of income on reinvestment together with a change in the date of receiving interest account for the unusual debits and credits to that fund.

In the Observatory several gifts for current use and an increase in the net income from time-signals have about made up for a decrease of income from property; but increased expenditures have caused a deficit, which has eaten up the small surplus of former years and made a debt of $749.67. In 1876–77 there was a surplus of $208.73.

In the Bussey Institution the addition of a Horticultural department, at a cost for the year of about $1,200, has carried the deficit for the year up to $3,615.73, which has used up the balance of accumulated income together with the sum of $978.75 taken from the principal of the Bussey Building Fund. As the Bussey Building Fund was made from income of the Bussey Institution put by in prosperous years there is no restriction upon its use, but the amount of it is too small to permit much longer the present rate of expenditure of the Institution. In 1876–77 the deficit of the Bussey Institution was $2,562.63.

The Bussey Trust has this year suffered some further loss, from the same causes as before. One more old tenant of its stores has failed, and more of its property has been lying vacant than during last year. Smaller expenditures for insurance, taxes, and repairs have, however, left the net income nearly as large as for last year. For the future the outlook is not good, as several old leases expire during the year 1879 which can be renewed only at lower rents, and some of the stores must be repaired and improved in order to retain good tenants.

Gifts have been received during the year as follows:—

TO FORM NEW FUNDS OR INCREASE OLD ONES.

From Edward Russell, Esq., $100, towards the foundation of a scholarship.

From Rev. R. M. Hodges, $5000, as the foundation of a scholarship.

From the trustees of the Class Subscription Fund, an additional payment of $20,000.

From the trustees under the will of James Arnold, $627.09, as a final payment upon the gift for the Arnold Arboretum.

From the executor of Miss Levina Hoar, $500, to be added to the amount heretofore received for the Levina Hoar Scholarship for the town of Lincoln.

From the Teachers and Students of the Bloomsburg, Penn., State Normal School, $30, for the Teachers and Pupils Fund.

GIFTS FOR IMMEDIATE USE.

From an anonymous friend, $500, to increase the salary of the Professor of Entomology.

Through Professor Gray, an anonymous gift to the Herbarium of $1000.

From the Massachusetts Society for Promoting Agriculture, $2500, for the improvement and development of the Botanic Garden and Arnold Arboretum.

From George W. Wales, Esq., $200, for books for the Library, in continuance of former gifts for the same purpose.

From Thomas G. Appleton, Esq., $50, towards the current expenses of the Astronomical Observatory.

From Mrs. John M. Forbes, $200, towards the current expenses of the Astronomical Observatory, being the first of five similar annual payments.

OTHER GIFTS.

From Augustus Hemenway, Esq., a new Gymnasium.

From the Association of Alumni of Harvard College, the Memorial Hall Building.

A marble statue of President Quincy, by William W. Story. The subscription for this statue was begun some years since with about $2000, from graduates of the College and others, and has recently been completed with additional subscriptions amounting to $1500, and a bequest of $5000 from the late George Bemis, of the class of 1835.

From the executors of the late Mrs. Anne E. P. Sever notice was received of legacies to the College amounting to $140,000, but the money was not received within the year.

EDWARD W. HOOPER,
Treasurer.

BOSTON, DEC. 10, 1878.

ACCOUNTS.

1877-78.

General Statement of Receipts and Disbursements for the year ending

INCOME.

Interest on notes, mortgages, and advances, ...		$61,161.55
“ “ United States Bonds, ...		8,934.67
“ “ Massachusetts 5% Bonds, ...		5,843.72
“ “ Policy Mass. Hospital Life Insurance Co., ...		250.00
“ “ New Boston Coal Mining Co. Bonds, ...		700.00
“ “ Erie Basin Dock and Warehouse Bonds, ...		1,400.00
“ “ Railroad Bonds.		
Buffalo, Bradford, and Pittsburg, . . .	4,200.00	
Burlington & Mo. River in Nebraska, . .	354.17	
“ “ “ in Iowa, 1879,	2,500.27	
“ “ “ in Iowa, 1893,	3,074.57	
Chicago, Burlington, and Quincy, . . .	2,970.00	
Eastern, ...	1,793.19	
Ionia and Lansing, ...	5,760.00	
Michigan Southern & Northern Indiana,	70.00	
New York Central, ...	1,680.00	
Philadelphia, Wilmington, and Baltimore,	6,000.00	
Summit Branch, ...	700.00	
		29,102.20
“ “ Municipal Bonds.		
Brookline, ...	210.00	
Cambridge, 1884, ...	660.00	
Cambridge, 1904, ...	180.00	
Chicago, ...	985.83	
Cincinnati, ...	140.00	
Fall River, ...	1,560.00	
Hartford, ...	1,200.00	
Lawrence, ...	300.00	
Minneapolis, ...	160.00	
Providence, ...	1,011.25	
Springfield, ...	210.00	
		6,617.08
Dividends on Stocks.		
Charles River National Bank, ...	540.00	
First (Cambridge) “ “	400.00	
Fitchburg “ “	168.00	
Massachusetts “ “	120.00	
Merchants “ “	1,716.00	
New England “ “	240.50	
Old Boston “ “	600.00	
Schenectady “ “ (N. Y.),	200.00	
Bank taxes refunded, ...	979.14	
		4,963.64
Amoskeag Manufacturing Co., ...	1,080.00	
Cocheco “ “	700.00	
Amounts carried forward, . .	$1,780.00	$118,972.86

by the Treasurer of Harvard College,
August 31, 1878.

EXPENSES.

Paid to account of Expenses in the

University, as per Table I. (page 29),		$41,092.67
College, " " II. (page 34).		
Salaries for instruction,	126,048.18	
Repairs,	6,082.26	
General Expenses,	34,795.71	
Scholarships,	24,490.49	
Beneficiaries,	1,105.84	
Prizes for Reading, &c.,	1,226.57	
Botanic Garden,	4,457.94	
Herbarium,	1,023.85	
Gymnasium,	1,588.49	
		200,819.33
Library, as per Table III. (page 35).		
Books,	14,659.74	
Salaries and other expenses,	23,586.60	
		38,246.34
Divinity School, as per Table IV. (page 36),		20,136.65
Law School, as per Table V. (page 37),		32,220.92
Medical School, as per Table VI. (page 38),		44,157.52
Dental School, as per Table VII. (page 39),		5,687.96
Lawrence Scientific School, as per Table VIII. (page 40),		49,678.01
Observatory, as per Table IX. (page 41),		14,731.89
Bussey Institution, as per Table X. (page 42),	14,967.15	
James Arnold Fund, as per Table X. (page 42),	3,500.00	
		18,467.15
Amount carried forward		$465,238.44

General Statement of Receipts and Disbursements for the year ending

INCOME.

Amounts brought forward, ...	$1,780.00	$118.972.86
Dividends on Stocks, continued.		
Massachusetts Manufacturing Co., . . .	420.00	
Merrimack, " " . . .	1,190.00	
Nashua " " . . .	1,260.00	
Pacific Mills " " . . .	2,600.00	
Stark Mills " " . . .	570.00	
Wamsutta " " . . .	320.00	
		8,140.00
Chicago, Burlington, and Quincy R. R.,	4,224.00	
Boston and Albany Railroad, ...	800.00	
Pittsfield and North Adams Railroad, . .	315.00	
Quincy Railroad Bridge Company, . . .	100.00	
Pittsburg, Ft. Wayne, & Chicago R. R.,	350.00	
		5,789.00
Real Estate, from rents, &c. (gross receipts).		
Cambridge (Houses and Lands), ...	39,321.68	
Boston (general investments), ...	49,293.00	
Bussey stores, ...	38,719.79	
Sundry estates, ...	8,521.07	
		135,855.54
Term Bills.		
College, as per Table II., ...	157,864.07	
Divinity School, as per Table IV., ...	2,626.34	
Law School, as per Table V., ...	25,333.35	
Medical School, as per Table VI., ...	44,045.12	
Dental School, as per Table VII., ...	2,540.00	
Lawrence Scientific School, as per Table VIII., .	4,345.00	
Observatory, as per Table IX., ...	150.00	
Bussey Institution, as per Table X., ...	547.00	
		237,450.88
Sundries.		
From Wm. Pennoyer Annuity, ...	286.08	
Trustees of Thayer Scholarships, ...	3,600.00	
" Count Rumford's Legacy, . . .	605.36	
" Edward Hopkins, ...	233.52	
Pew rents in Appleton Chapel, ...	246.00	
For use of Library by resident graduates and others,	90.00	
Degrees of A.M. and S.D., ...	420.00	
Degree of Batchelor of Arts out of course, Examination fees, &c., ...	151.00	
Fees in Infirmary & Laboratory, Dental School, . .	592.72	
Printing by College Press for other Departments, .	619.95	
Sales of wood, grass, &c., ...	660.80	
Sale of time signals from Observatory, ...	2,742.50	
Sale of tickets to Commencement Dinner of 1878, .	505.00	
Amounts carried forward, ...	$10,752.93	$506,208.28

by the Treasurer of Harvard College, August 31, 1878.

EXPENSES.

Amount brought forward,			$465,238.44
Real Estate, expenses.			
Insurance.			
Cambridge,	108.75		
Boston,	55.00		
Bussey stores,	69.00		
		232.75	
Taxes.			
Cambridge,	2,088.77		
Boston,	5.829.50		
Bussey stores, &c.,	7,010.90		
		14,929.17	
Interest.			
Cambridge (on advances),	420.00		
Boston (on mortgage),	2,625.00		
Bussey stores (on advances),	2,404.93		
		5,449.93	
Repairs, improvements, care, cleaning and sundries.			
Cambridge,	11,682.98		
Boston,	10.067.46		
Bussey stores,	1,656.31		
Bussey Farm,	71.00		
		23,477.75	
Heating and hoisting for Bussey stores,		2,956.61	
			47,046.21
Annuities.			
Bussey,		6,900.00	
Gore,		1,200.00	
Mary Osgood,		360.00	
Lucy Osgood,		780.00	
Class of 1802,		170.00	
Anonymous,		720.00	
			10,130.00
Sundry payments from income.			
To Building Committee of Memorial Hall,		3.64	
To the Treasurer of the Museum of Fine Arts, from Gray Fund for Engravings,		1,223.55	
The income of the Daniel Williams Fund for the benefit of the Herring Pond and Mashpee Indians,		1,038.81	
The income of the Sarah Winslow Fund, to the Minister and Teacher at Tyngsboro', Mass.,		302.62	
			2,568.62
Amount carried forward,			$524,983.27

General Statement of Receipts and Disbursement
for the year ending

INCOME.

Amounts brought forward, ...	$10,752.93	$506.208.28
Sale of books, pamphlets, Bulletins, &c., ...	506.87	
Sale of Astronomical engravings, ...	79.00	
Use of Sanders Theatre by Societies, ...	149.40	
U. S. Navy Department, for account of expenses in observing the transit of Mercury, ...	100.00	
		11,588.20
Sundry gifts for immediate use, see page 7, ...		4,450.00
		522,246.48

RECEIPTS EXCLUSIVE OF INCOME.

GIFTS.

Class Subscription Fund (additional), ...	$20,000.00	
Hodges Scholarship, ...	5,000.00	
Edward Russell Scholarship, ...	100.00	
Levina Hoar " (additional), ...	500.00	
James Arnold Fund "	627.09	
Teachers and Pupils Fund "	30.00	
		26,257.09

SALES.

$37,500 United States 6% called Bonds, ...	38,897.50	
$5,000 Burl'n & Mo. River in Nebraska Bonds, . . .	5,550.00	
Sale of rights to take new stock of Cocheco Mf'g Co.,	487.50	
		44,935.00

SUNDRIES.

Notes and mortgages paid off, ...	$1,036,000.00		
less invested in notes and mortgages,	921,255.29	114,744.71	
Drafts on Baring Brothers & Co., . . .	14,522.94		
less paid them on account, ...	11,240.15	3,282.79	
From Dining Hall Association, to reduce debt, . . .		1,000.00	
" " " one year's insurance,		168.75	
Advances to College wharf repaid, ...		298.42	
" for accrued interest repaid, ...		626.06	
Chicago Certificates of Indebtedness, paid off, ...		7,000.00	
New England Glass Co. stock dividends, ...		125.00	
Advance to Suspense account last year, refunded, . .		570.58	
			127,816.31

Balance, September 1, 1877.		
In Suffolk National Bank, ...	15,255.78	
In hands of Allen Danforth, Bursar, including Term Bills not collected at that date, ...	64,223.68	
		79,479.46
		$800,734.34

by the Treasurer of Harvard College,
August 31, 1878.

EXPENSES.

Total of expenses brought forward, ...	$524,983.27

INVESTMENTS AND SUNDRY PAYMENTS.

United States 6% Bonds, ...	$100,000 cost,	104,012.50
Burlington & Mo. River in Iowa R.R. Bds. 8% of 1879,	2,000 cost,	2,060.00
Mortgage on Andrews Estate paid off, ...		75,000.00
Paid Building Com. of Memorial Hall (Sanders Theatre), ...		142.41
Advances for building extension to Library, ...		18,379.43

Balance, August 31, 1878.		
In Suffolk National Bank, ...	4,415.82	
In hands of Allen Danforth, Bursar, including Term Bills not collected at that date, ...	71,740.91	
		76,156.73
		$800,734.84

The following Account exhibits the State of the Property, as embraced in the Treasurer's Books, August 31, 1878.

Notes and Mortgages,				$812,009.65
United States 6% Bonds,	$192,950	valued at		201,624.42
Massachusetts Bonds, 5's,	115,000	" "		119,950.00
*New Boston Coal Mining Co. Bonds,	10,000	" "		9,000.00
*Erie Basin Dock & Warehouse "	20,000	" "		20,000.00
Municipal Bonds.				
Brookline,	3,000.00	valued at	3,450.00	
Cambridge, 1884,	11,000.00	" "	11,770.00	
Cambridge, 1904,	3,000.00	" "	3,330.00	
*Chicago,	6,000.00	" "	6,000.00	
*Cincinnati,	2,000.00	" "	2,000.00	
Fall River,	26,000.00	" "	27,360.00	
Hartford,	20,000.00	" "	21,000.00	
Lawrence,	5,000.00	" "	5,350.00	
*Minneapolis,	2,000.00	" "	2,000.00	
Springfield,	3,000.00	" "	3,180.00	
Providence,	20,000.00	" "	21,000.00	
				106,440.00
Railroad Bonds.				
*Buffalo, Bradford, and Pittsburg,	60,000	valued at	60,000.00	
Burl'n & Mo. River in Iowa, 1879,	35,000	" "	36,215.00	
" " " in Iowa, 1893,	50,000	" "	54,945.00	
Chicago, Burlington, and Quincy,	47,000	" "	46,600.00	
Eastern Railroad,	50,000	" "	48,000.00	
*European and North American,	1,000	" "	1,000.00	
Ionia and Lansing,	72,000	" "	59,520.00	
*Michigan So. & No. Indiana,	1,000	" "	1,000.00	
New York Central,	28,000	" "	27,000.00	
Phil., Wil., and Baltimore,	100,000	" "	95,000.00	
*Summit Branch,	10,000	" "	10,000.00	
				439,280.00
Railroad Stock.				
Boston and Albany,	100	shares,	14,350.00	
Chicago, Burlington, and Quincy,	528	"	53,819.37	
*Pittsburgh, Fort Wayne and Chicago,	50	"	5,000.00	
Pittsfield and North Adams,	63	"	6,300.00	
Quincy R. R. Bridge Co.,	10	"	1,250.00	
*St. Paul & Duluth,	36	"	1,200,00	
				81,919.37
Amount carried forward.				$1,790,223.44

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*Received as gifts.

Amount brought forward, ...			$1,790,223.44
Manufacturing Stock.			
Amoskeag, ...	12 shares,	12,000.00	
Cocheco, ...	20 "	6,512.50	
Massachusetts Mills, ...	7 "	6,600.00	
Merrimack, ...	17 "	17,000.00	
Nashua, ...	36 "	25,560.00	
*New Bedford Copper Co., ...	5 "	250.00	
*New England Glass Co., ...	1 "	325.00	
Pacific Mills, ...	20 "	17,468.29	
Stark Mills, ...	19 "	18,900.00	
Wamsutta Mills, ...	80 "	8,880.00	
			113,495.79
Bank Stock.			
Charles River, ...	60 shares,	6,000.00	
First Cambridge, ...	50 "	5,000.00	
Fitchburg, ...	24 "	2,403.00	
Massachusetts, ...	12 "	3,000.00	
Merchants, ...	264 "	34,732.00	
New England, ...	37 "	3,896.00	
Old Boston, ...	200 "	8,933.00	
*Schenectady (N. Y.), ...	40 "	2,200.00	
			66,164.00
Real Estate.			
Houses and Lands in Cambridge yielding income,		357,163.83	
Unimproved Lands in Cambridge, ...		106,887.49	
Bussey Real Estate in Boston and Dedham, . .		413,092.80	
Amory Estate, Franklin Street, Boston, . . .		165,615.81	
Webb Estate, Washington Street, Boston, . . .		164,604.79	
Andrews Estate, Washington Street, Boston, . .		147,000.00	
Estate on Hawley Street, Boston, ...		38,650.78	
Estate on Hawkins Street, "		29,476.09	
Jarvis Estate, Baltimore, ...		11,800.00	
Ward's (Bumkin) Island, Boston Harbor, . .		1,200.00	
Reversion of Buildings on Brattle Street, Boston,		1,000.00	
			1,436,491.59
Sundries.			
In hands of Count Rumford's Trustees in Paris,		10,000.00	
Annuity of William Pennoyer, valued at . . .		4,444.44	
Policy of the Mass. Hospital Life Insurance Co.,		5,000.00	
Due from Dining Hall Association, ...		41,900.91	
" " Lawrence Scientific School, ...		8,288.69	
" " Bussey Trust, ...		40,082.13	
" " Dental School, ...		16,564.84	
" " Observatory, ...		749.67	
Balance of acct. for decorating Appleton Chapel,		2,859.62	
Balance of account repairing College Wharf, .		1,438.43	
Term bills not collected August 31, 1878, . . .		68,387.30	
Baring Brothers & Co., ...		1,678.59	
			201,394.62
Cash in Suffolk National Bank, ...		4,415.82	
" " hands of Allen Danforth, Bursar, ...		3,353.61	7,769.43
			$3,615,538.87

* Received as gifts.

The foregoing Property represents the following Funds and Balances, and is answerable for the same.

UNIVERSITY FUNDS.

Principal, Sept. 1, 1877.		Principal, Aug. 31, 1878.	
$166,266.01	Stock Account (so called),	$159,891.36	
221,736.89	Insurance and Guaranty Fund (so called),	133,174.21	
5,250.00	**Samuel D. Bradford** Fund,	5,250.00	
15,750.00	**Israel Munson** Fund,	15,750.00	
17,004.97	**Leonard Jarvis** Fund,	17.004.97	
6,523.07	**Peter C. Brooks** Fund for building a President's House,	4,197.01	
156.82	**Thomas Cotton** Fund,	156.08	
57,036.60	**John Parker** Fellowships,	57,828.97	
10,972.71	**Harris** Fellowships,	10,616.32	
12,530.35	**John Thornton Kirkland** Fellowship,	12,189.61	
25,119.01	**Graduates'** Scholarship,	25,571.63	
1,283.66	**Sumner** Prize Fund,	1,358.90	
44,076.34	**Winn** Prof. of Ecclesiastical History,	45,409.19	
			488,348.25
	COLLEGE FUNDS.		
27,748.64	**Alford** Professorship,	27,748.64	
28,337.40	**Boylston** "	28,337.40	
21,619.50	**Eliot** "	21,619.50	
10,000.00	" " **(Jon. Phillips's gift)**,	10,000.00	
8,500.01	**Erving** "	8,500.01	
35,990.99	**Fisher** "	35,990.99	
18,904.90	**Hersey** "	19,549.77	
14,123.12	" " **(Thomas Lee's gift)**,	14,950.73	
3,747.33	**Hollis** " (Mathematics),	3,747.33	
26,186.19	**Hollis** " (Divinity),	27,720.69	
43,062.93	**McLean** "	43,062.93	
21,000.00	**Perkins** "	21,000.00	
25,020.19	**Plummer** "	25,020.19	
52,500.00	**Pope** "	52,500.00	
52,996.37	**Rumford** "	52,996.37	
23,139.83	**Smith** "	23,139.83	
16,240.38	Fund for Permanent Tutors,	16,240.38	
105,000.00	**Class Subscription** Fund,	125,000.00	
12,425.54	**Daniel H. Peirce** "	12,472.44	
1,544.72	**Paul Dudley** Fund for Lectures,	1,635.26	
31,500.00	**Jonathan Phillips** Fund (unrestricted)	31,500.00	
1,050.00	**John A. Blanchard** " "	1,050.00	
2,597.47	**John W. P. Abbot** " "	2,749.65	
348.58	**Henry Flynt's** Bequest,	346.94	
2,576.01	**Abbot** Scholarship,	2,576.96	
737.14	**Alford** . "	780.33	
5,191.27	**Bassett** "	5,402.51	
$1,170,794.94	Amounts carried forward,	$610,638.85	488,348.25

Principal, Sept. 1, 1877.		Principal, Aug. 31, 1878.	
$1,170,794.94	. . . . Amounts brought forward, .	$610,638.85	488,348.25
12,202.74	**Bigelow** Scholarship, ...	12,084.50	
96,909.75	**Bowditch** Scholarships, ...	96,291.36	
2,722.75	**Browne** "	2,732.32	
7,109.14	**Class of 1802** Scholarship, ...	7,105.73	
3,206.01	" **1814** "	3,193.88	
4,871.12	" **1815** " (**Kirkland**),	4,906.56	
3,699.47	" **1817** "	3,716.28	
2,639.88	" **1835** "	2,644.58	
3,586.83	" **1841** "	3,622.03	
2,279.24	" **1852** " (**Dana**) . .	2,412.79	
5,066.27	**Crowninshield** "	5,363.14	
5,343.25	**W. S. Eliot** "	5,356.35	
2,382.57	**Greene** "	2,402.21	
	Hodges "	5,146.50	
6,037.75	**Farrar** "	6,041.58	
4,392.77	**Levina Hoar** "	4,960.87	
4,759.00	**Hollis** "	4,787.88	
1,079.58	**Matthews** " (balance), .	1,376.49	
7,966.30	**Morey** "	7,933.11	
6,342.91	**Pennoyer** "	6,360.21	
	Edward Russell "	105.86	
4,134.54	**Saltonstall** " (Mary & Leverett),	4,076.85	
485.03	" " (Dorothy), . .	513.45	
5,145.77	**Slade** "	5,197.33	
3,158.11	**Sever** "	3,168.17	
9,364.53	**Sewall** "	9,329.99	
32,812.55	**Shattuck** "	33,225.19	
2,734.72	**Story** "	2,744.99	
4,215.11	**Gorham Thomas** "	4,212.11	
6,264.27	**Toppan** "	6,331.34	
25,175.83	**Townsend** "	25,151.14	
3,820.48	**Walcott** "	3,844.33	
6,578.34	**Whiting** "	6,963.81	
11,523.65	Exhibitions, ...	11,514.00	
1,730.74	Senior Exhibition, ...	1,742.18	
1,200.00	**Samuel Ward** Fund, ...	1,200.00	
808.08	**John Glover** Fund, ...	855.43	
1,724.12	**Rebecca A. Perkins** Fund, . . .	1,825.15	
10,079.50	**Quincy Tufts** Fund, . . , ...	10,389.31	
16,511.78	**Lee** Prizes for Reading, ...	16,419.38	
4,275.00	**Boylston** Prizes for Elocution, . .	4,330.50	
10,913.29	**Bowdoin** Prizes for Dissertations, .	11,127.79	
1,028.43	**Hopkins** Gift for "Deturs," . . .	975.62	
19,931.68	Botanic Garden Fund, ...	20,096.26	
15,882.31	Mass. Fund for Botanic Garden, . .	15,882.31	
13,589.96	Herbarium Fund, ...	14,712.06	
125.00	Salary account (unexpended balance),	125.00	
			1,015,136.72
$1,566,605.09	. . . Amounts carried forward, ...		$1,503,484.97

Principal, Sept. 1, 1877.		Principal, Aug. 31, 1878.	
$1,566,605.09	. . . . . Amounts brought forward.		$1,503,484.97
	LIBRARY FUNDS.		
10,646.12	Subscription for Library, ...	10,231.60	
2,328.31	**Bowditch** Fund, ...	2,093.46	
5,275.20	**Denny** "	5,233.90	
5,348.76	**Farrar** "	5,250.50	
2,712.56	**Haven** "	2,859.99	
5,292.38	**Hayward** "	5,203.09	
2,450.63	**Hollis** "	2,341.92	
2,083.40	**Homer** "	2,122.78	
5,383.96	**Lane** "	5,207.47	
60,382.37	**Minot** "	60,059.60	
5,386.31	**Salisbury** "	5,227.27	
3,836.42	**Shapleigh** "	3,917.99	
34,824.12	**Sumner** "	34,149.12	
5,119.92	**Tucker** "	5,031.10	
5,849.34	**Ward** "	5,263.55	
429.03	**Wales** "	296.50	
16,041.59	**Walker** "	15,772.73	
369.70	Sundry gifts, ...	340.58	
983.26	Sales of pamphlets, etc.	15.89	
			170,619.04
	LAW SCHOOL FUNDS.		
8,909.44	Law School (balance), ...	10,176.18	
15,750,00	**Dane** Professorship, ...	15,750.00	
23,979.82	**Bussey** "	23,979.82	
8,340.81	**Royall** "	8,340.81	
			58,246.81
	MEDICAL SCHOOL FUNDS.		
22,777.88	Medical School (balance), ...	26,381.49	
19,192.65	**Jackson** Medical Fund,.	19,192.65	
14,603.98	**Geo. C. Shattuck** Fund, ...	14,569.22	
10,162.43	**Warren** Fund for Anatomical Museum,	10,671.01	
3,905.29	**Boylston** Fund for Medical Prizes, .	4,134.12	
1,733.80	" " " " Books, .	1,835.41	
2,016.91	Medical Library Fund, ...	2,130.11	
25,772.22	Medical School Building Fund, . .	27,232.97	
			106,146.98
	DIVINITY SCHOOL FUNDS.		
22,308.45	General Fund, ...	18,451.26	
37,583.74	**Bussey** Professorship, ...	37,583.74	
16,015.81	**Parkman** "	16,015.81	
6,008.43	**Hancock** Professorship, ...	6,008.43	
		78,059.24	
$1,979,910.13	. . . . . Amounts carried forward, ...		$1,838,497.80

Principal, Sept. 1, 1877.		Principal, Aug. 31, 1878.	
$1,979,910.13	Amounts brought forward,	$78,059.24	1,838,497.80
20,280.38	**Dexter** Lectureship,	20,280.38	
9,184.69	**Henry Lienow** Fund,	9,184.69	
5,250.00	**Mary P. Townsend** Fund,	5,250.00	
2,100.00	**Winthrop Ward** Fund,	2,100.00	
1,050.00	**Samuel Hoar** "	1,050.00	
1,050.00	**Abraham W. Fuller** Fund,	1,050.00	
1,050.00	**Caroline Merriam** "	1,050.00	
12,612.26	**Jackson** Foundation,	12,571.32	
2,177.95	**Joshua Clapp** Fund,	2,177.95	
1,050.00	**William Pomeroy** Fund,	1,050.00	
525.00	**Hannah C. Andrews** Fund,	525.00	
2,654.38	**J. Henry Kendall** Scholarship,	2,809.90	
2,650.49	**Nancy Kendall** "	2,665.78	
911.34	**Lewis Gould** Fund	911.34	
1,000.00	**Adams Ayer** "	1,000.00	
7,875.00	**Joseph Baker** "	7,875,00	
5,479.98	**Thomas Cary** Scholarships,	5,451.11	
2,135.32	**George Chapman** Scholarship,	2,167.09	
2,555.46	**Joshua Clapp** "	2,705.18	
1,274.10	Beneficiary money returned	1,348.76	
			161,282.74

LAWRENCE SCIENTIFIC SCHOOL FUNDS.

38,807.17	Professorship of Engineering,	38,807.17	
2,860.50	Professorship of Chemistry,	2,860.50	
50,000.00	**James Lawrence** Fund,	50,000.00	
61,536,43	**Abbott Lawrence** "	61,536.43	
25,686.85	**John B. Barringer** "	25,686.85	
70,142.52	**Sturgis Hooper** "	70,330.00	
51,750.00	**Gray** Fund for Zoölogical Museum,	50,000.00	
297,933.10	**Agassiz Memorial** Fund,	297,933.10	
7,564.01	Teachers' and Pupils' Fund,	7,594.01	
117,469.34	Permanent Fund,	117,469.34	
7,740.66	**Humboldt** Fund,	7,740.66	
8,345.26	**Agassiz** Building Fund,	6,849.04	
			736,807.10

OBSERVATORY FUNDS.

110,293.88	**Edward B. Phillips** Fund,	110,293.88	
21,000.00	**James Hayward** "	21,000.00	
19,530.05	**David Sears** "	20,102.28	
10,649.35	**Josiah Quincy** "	10,536.49	
2,000.00	**Charlotte Harris** "	2,000.00	
10,000.00	Anonymous Observatory Fund (at present charged with an Annuity),	10,000.00	
435.39	Observatory (unexpended balance),		
			173,932.65
$2,976,520.99	Amounts carried forward,		$2,910,520.29

Principal, Sept. 1, 1877.		Principal, Aug. 31, 1878.	
$2,976,520.99	. . . . . Amounts brought forward, ...		$2,910,520.29

OTHER FUNDS FOR SPECIAL PURPOSES.

Principal, Sept. 1, 1877.		Principal, Aug. 31, 1878.	
413,092.80	**Bussey Trust** (income thereof, ½ to Bussey Institution, ¼ to Law School, and ¼ to Divinity School), . . .	413,092.80	
2,636.98	**Bussey** Institution, ...		
13,623.70	**Bussey** Building Fund, ...	12,644.95	
141,162.42	**James Arnold** "	147,578.36	
42,000.00	**James Savage** "	42,000.00	
142.41	**Charles Sanders** Bequest, . . .		
20,647.00	**Gray** Fund for Engravings, . . .	20,778.86	
22,356.21	**Gore** Annuity Fund, ...	22,466.27	
7,126.99	**Mary Osgood** Fund (at present charged with an Annuity), . . .	7,184.63	
13,087.42	**Lucy Osgood** Fund (at present charged with an Annuity), . . .	13,074.32	
1,922.79	**Gospel Church** Fund, ...	2,035.48	
8,171.50	**John Foster** Fund (income to Law School, Divinity School, and Medical School, in turn), ...	8,171.50	
			684,027.17

FUNDS IN TRUST FOR PURPOSES NOT CONNECTED WITH THE COLLEGE.

Principal, Sept. 1, 1877.		Principal, Aug. 31, 1878.	
16,228.50	**Daniel Williams** Fund for the conversion of the Indians, ...	16,140.71	
4,875.39	**Sarah Winslow** Fund, for the Minister and Teacher at Tyngsborough, Mass.,	4,850.70	
			20,991.41
$3,678,595.10			$3,615,538.87

Changes in the Funds during the Year 1877-78.

Total amount of Funds, September 1, 1877, as above,	$3,678,595.10	
" " " " August 31, 1878, " "	3,615,538.87	
Showing a total decrease during the year of . . .		$63,056.23
Which is made up as follows: —		
Decrease of Insurance and Guaranty Fund, by cost of new Library extension, ...	$89,012.68	
Decrease of Stock Account by this year's deficit charged off, ...	6,374.65	
Sanders Bequest (balance) spent on Theatre, . . .	142.41	
Bussey Institution, balance spent, ...	2,636.98	
Observatory, " "	435.39	
		98,602.11
Deduct amount of		
Increase more than decrease of Funds which appear both at beginning and end of year (from excess of income over current expenditure), ...	8,686.43	
Increase of Funds established during the year, . . .	152.36	
Increase of Insurance and Guaranty Fund by gain on sale of securities, ...	450.00	
Gifts forming new Funds or increasing old ones, . .	26,257.09	
		35,545.88
		$63,056.23

Decrease of Insurance and Guaranty Fund, and Stock Account, as above, ...	$95,387.33	
Sundry balances paid off, as above, ...	3,214.78	
		98,602.11
Less net increase of old Funds and Funds established during the year, as above, ...	8,838.79	
And increase of Insurance and Guaranty Fund, as above,	450.00	
		9,288.79
Leaving amount of the net decrease of the Funds and balances, excluding gifts, as is also shown in the following table.		$89,313.32

Statement showing Changes in the

Increase of Funds which appear both at the beginning and the end of the year, being the excess of income (including gifts for immediate use) over payments towards the special objects of those Funds.

John Parker Fellowships,	$792.37
Graduates' Scholarship,	452.62
Sumner Prize Fund,	75.24
Winn Professorship of Ecclesiastical History,	1,332.85
Hersey Professorship,	644.87
" " **(Thomas Lee's gift),**	827.61
Hollis Professorship of Divinity,	1,534.50
Daniel H. Peirce Fund,	46.90
Paul Dudley Fund for Lectures,	90.54
John W. P. Abbott Fund,	152.18
Abbot Scholarship,	.95
Alford "	43.19
Bassett "	211.24
Browne Scholarships,	9.57
Class of 1815 Scholarship **(Kirkland),**	35.44
" **1817** "	16.76
" **1835** "	4.70
" **1841** "	35.20
" **1852** " **(Dana),**	133.55
Crowninshield "	296.87
W. S. Eliot "	13.10
Greene "	19.64
Farrar "	3.83
Levina Hoar "	68.10
Hollis "	28.88
Matthews " (Balance),	296.91
Pennoyer "	17.30
Saltonstall " **(Dorothy),**	28.42
Slade "	51.56
Sever "	10.06
Shattuck "	412.64
Story "	10.27
Toppan "	67.07
Walcott "	23.85
Whiting "	385.47
Senior Exhibition,	11.44
John Glover Fund,	47.35
R. A. Perkins "	101.03
Quincy Tufts "	309.81
Boylston Prizes for Elocution,	55.50
Bowdoin " Dissertations,	214.50
Botanic Garden Fund,	164.58
Herbarium Fund,	1,122.10
Amount carried forward,	**$10,200.56**

Different Funds during the year 1877–78.

Decrease of Funds, which appear both at the beginning and the end of the year, being the excess of payments over income received for the special objects of those Funds.

Peter C. Brooks Fund,	$2,326.06
Thomas Cotton "	.74
Harris Fellowships,	356.39
John Thornton Kirkland Fellowship,	390.74
Henry Flynt's Bequest,	1.64
Bigelow Scholarship,	118.24
Bowditch Scholarships,	618.39
Class of 1802 Scholarship,	3.41
" **1814** "	12.13
Morey "	33.19
Saltonstall " **(Mary & Leverett),**	57.69
Sewall "	34.54
Gorham Thomas "	3.00
Townsend "	24.69
Exhibitions,	9.65
Lee Prizes for Reading,	92.40
Hopkins Gift for "Deturs,"	52.81
Subscription for Library,	414.52
Bowditch Book Fund,	234.85
Denny " "	41.30
Farrar " "	98.26
Hayward " "	89.29
Hollis " "	108.71
Lane " "	176.49
Minot " "	322.77
Salisbury " "	159.04
Sumner " "	675.00
Tucker " "	88.82
Ward " "	85.79
Wales " "	132.58
Walker " "	268.86
Sundry gifts,	29.12
Sales of pamphlets, etc.,	967.37
George C. Shattuck Fund,	34.76
Divinity School,	8,857.19
Jackson Foundation,	40.94
Thomas Cary Scholarships,	28.87
Gray Fund for Zoölogical Museum,	1,750.00
Agassiz Building Fund,	1,496.22
Quincy Fund,	112.86
Bussey Building Fund,	978.75
Lucy Osgood "	13.10
Daniel Williams "	87.79
Sarah Winslow Fund,	24.69
Amount carried forward,	$16,453.60

Statement showing the Changes in the Funds

Amount brought forward,		$10,200.56
Haven Book Fund,		147.43
Homer " "		39.38
Shapleigh "		81.57
Law School (balance),		1,266.74
Medical School (balance),		3,603.61
Warren Fund for Anatomical Museum,		508.58
Boylston Fund for Medical Prizes,		228.83
Boylston " " Books,		101.61
Medical Library Fund,		113.20
Medical School Building Fund,		1,460.75
J. H. Kendall Scholarship,		155.52
Nancy " "		15.29
George Chapman "		31.77
Joshua Clapp "		149.72
Beneficiary money returned,		74.66
Sturgis Hooper Fund,		187.48
Sears "		572.23
James Arnold "		5,788.85
Gray Fund for Engravings,		131.86
Gore Annuity Fund,		110.06
Mary Osgood "		57.64
Gospel Church "		112.69
		25,140.03
Increase of Funds established during the year.		
Hodges Scholarship,	146.50	
Edward Russell Scholarship,	5.86	
		152.36
Insurance and Guaranty Fund, gain from sale of securities,		450.00
		25,742.39
Balance, which is the net decrease of the Funds for the year 1877-78, apart from gifts,		89,313.32
Total,		$115,055.71

during the year 1877–78. (*Continued.*)

Amount brought forward, ...		$16,453.60
Other decrease as follows:		
Insurance and Guaranty Fund, cost of new Library extension charged off, ...	89,012.68	
Stock Account, this year's deficit charged off, .	6,374.65	
Sanders Bequest (balance), spent on Theatre,	142.41	
Bussey Institution, balance spent, ...	2,636.98	
Observatory, " "	435.39	
		98,602.11
Total, ...		$115,055.71

The following tables are not found, in their present form, in the Treasurer's books. They are intended to exhibit with some detail the resources and the expenditures of each department of the University. The income of every fund held by the University is given in these tables, and also the sum paid out for the specific object of each and every fund, in case that sum be either less or more than the actual income of the fund. If the object to which the income of a fund is to be applied be a general one, — like salaries, for example,— no separate mention is made in these tables of that appropriation. That particular payment is merged with others of the same kind under the general heading. A balanced summary of these tables will be found on page 45.

Table No. I.

THE UNIVERSITY.

RECEIPTS.

Income of the unappropriated fund heretofore called the Stock Account,	$9,743.19	
Income of the following funds : —		
Insurance and Guaranty,	11,696.38	
Israel Munson,	922.95	
Leonard Jarvis,	970.01	
Samuel D. Bradford,	307.65	
Peter C. Brooks,	263.70	
Thomas Cotton,	8.61	
Parker Fellowship,	3,342.37	
John Thornton Kirkland Fellowship,	734.26	
Harris Fellowship,	643.02	
Graduates Scholarship,	1,252.62	
Sumner Prize,	75.24	
Winn Professorship,	2,582.85	
		32,542.85
From resident graduates and others for the use of the Library,		90.00
For the degrees of Ph.D. and S.D.,		420.00
For care of the **Sarah Winslow** Fund,		7.75
Balance remaining after dividing the net income among the Funds,		48.13
For use of Sanders Theatre by societies,		149.40
		$33,258.13

PAYMENTS.

Overseers' Expenses.		
Advertising and postage,	$193.52	
Printing President's Annual Report,	941.88	
Printing Treasurer's " "	219.74	
Printing other reports, &c.,	82.34	1,437.48
Office Expenses.		
President's	414.53	
Treasurer's	173.96	
Bursar's	593.07	
Corporation Rooms (fuel, rent, &c.),	1,725.50	
		2,907.06
Amount carried forward,		$4,344.54

TABLE I., CONTINUED.

PAYMENTS.

Amount brought forward,		$4,344.54
Salaries.		
President,	$5,009.35	
Treasurer,	4,000.00	
Secretary of the Board of Overseers,	100.00	
Bursar,	3,000.00	
Bursar's Assistant,	1,147.30	
Secretary at Cambridge,	2,000.00	
Assistant Secretary at Cambridge,	1,500.00	
For keeping Treasurer's books and copying records and other papers,	2,600.00	
Superintendent of Buildings,	1,500.00	
		20,856.65
Winn Professorship Fund.		
For instruction,		1,250.00
Fellowships.		
John Parker,	2,550.00	
Harris,	999.41	
John Thornton Kirkland,	1,125.00	
Graduates Scholarship,	800.00	
		5,474.41
Memorial Hall and Sanders Theatre.		
Repairs, fuel, gas, &c.,		849.31
Sundries.		
Advertising,	299.22	
Diplomas,	34.15	
Interest on advances for Library extension,	3,801.45	
Labor, &c. on grounds outside of College Yard,	711.18	
Repairs and improvements on the President's house,	2,589.76	
Subscription to Mercantile Agency,	100.00	
Watering streets,	200.00	
Watchman,	560.00	
Incidentals,	22.00	
		8,317.76
		$41,092.67

TABLE No. II.

THE COLLEGE.

RECEIPTS.

From Term Bills.		
Instruction,	$120,501.66	
Rents available for general expenses,	36,997.41	
Diplomas,	365.00	
Amount carried forward,		$157,864.07

TABLE II., CONTINUED.

RECEIPTS.

Amount brought forward, ...			$157,864.07
Income of Scholarship Funds.			
Abbot, ...		$150.95	
Alford, ...		43.19	
Bassett. From special investment, ...		275.00	
Bigelow, ...		715.10	
Bowditch. Interest, ...	1,576.93		
From special investment,	3,554.68	5,131.61	
Browne, ...		159.57	
Class of 1802, ...		416.59	
" **1814,**		187.87	
" **1815 (Kirkland),**		285.44	
" **1817,**		216.76	
" **1835,**		154.70	
" **1841,**		210.20	
" **1852 (Dana)** (accumulating), . . .		133.55	
Crowninshield (accumulating), ...		296.87	
Wm. Samuel Eliot, ...		313.10	
Farrar, ...		353.83	
Greene, ...		139.64	
Levina Hoar (Town of Lincoln), ...		268.10	
Hodges (accumulating), ...		146.50	
Hollis, ...		278.88	
Matthews (½ of net rents of Hall), ...		5,106.96	
Morey, ...		466.81	
Pennoyer. Interest, ...	111.22		
Annuity, ...	286.08	397.30	
Edward Russell (accumulating), ...		5.86	
Saltonstall, Mary and Leverett, ...		242.31	
Saltonstall, Dorothy (accumulating), ...		28.42	
Savage, ...		300.00	
Sever, ...		185.06	
Sewall, ...		548.80	
Shattuck. Interest, ...	1,512.64		
From special investment, .	700.00	2,212.64	
Slade, ...		301.56	
Story, ...		160.27	
Gorham Thomas, ...		247.00	
Toppan, ...		367.07	
Townsend, ...		1,475.31	
Walcott, ...		223.85	
Whiting (accumulating), ...		385.47	22,532.14
Received from the Trustees of the **Thayer** Scholarships, ...			3,600.00
Other Beneficiary Funds, income of.			
"Exhibitions,"		675.31	
Senior "Exhibition,"		101.44	
Samuel Ward, ...		50.00	
John Glover (accumulating), ...		47.35	
Rebecca A. Perkins "		101.03	
Quincy Tufts, ...		590.69	1,565.82
Amount carried forward, ...			$185,562.03

TABLE II., CONTINUED.

RECEIPTS.

Amount brought forward,		$185,562.03
Prize Funds, income of.		
Thomas Lee Prizes for Reading,	$967.60	
Ward Nicholas Boylston Prizes for Elocution,	250.50	
James Bowdoin Prizes for Dissertations,	639.50	
Edward Hopkins Gift for "Deturs,"	293.76	2,151.36
Funds for Instruction.		
Income of the **Alford** Professorship,	1,626.09	
Boylston "	1,660.55	
Eliot "	1,266.93	
J. Phillips's addition to Eliot Prof.,	700.00	
Erving Professorship,	205.10	
Fisher "	2,109.07	
Hersey "	644.87	
Hollis " (Mathematics),	219.57	
McLean "	2,523.49	
Perkins "	1,230.60	
Plummer "	1,466.17	
Pope "	3,076.50	
Rumford "	3,124.93	
Smith "	1,356.00	
Fund for Permanent Tutors,	951.66	
Thos. Lee Fund for the Hersey Prof.	827.61	
Class Subscription,	6,446.00	
Henry Flynt,	19 22	
Hollis Prof. of Divinity (accumulat'g),	1,534.50	
Paul Dudley Fund for Lectures, "	90.54	
Anonymous gift, to increase a salary,	500.00	31,579.40
Botanic Garden.		
Income of accumulated income,	171.83	
" " investment of the Garden Fund,	1,020.00	
" " the Massachusetts Fund,	930.69	
Estimated value of use of house by Prof. Gray,	1,000.00	
Gift from the Mass. Soc. for Promot'g Agriculture,	1,500.00	4,622.52
Herbarium. Income of accumulated income,	121.30	
From special investment,	960.00	
Gift for immediate use,	1,000.00	
Sale of duplicates, etc.,	64.65	2,145.95
Income of **Jonathan Phillips's** unrestricted Fund,	1,845.90	
" " **John A. Blanchard's** " "	61.53	
" " **Daniel H. Pierce** Fund,	469.07	
" " **J. W. P. Abbot's** do. (accumulating),	152.18	2,528.68
Amount carried forward,		$228,589.94

TABLE II., CONTINUED.

RECEIPTS.

Sundries. Amount brought forward, ...		$228,589.94
Pew Rents, **Appleton** Chapel, ...	$246.00	
For the Degree of Bachelor of Arts out of course, examination fees, and duplicate diplomas, . .	151.00	
Sales of wood, grass, &c., ...	381.15	
For Printing by College Press for other departments,	619.95	
For use of rooms by College officers and societies,	614.11	
Sale of tickets to Commencement Dinner of 1878,	505.00	2,517.21
Total receipts, ...		$231,107.15

PAYMENTS.

Paid the incumbents of the following Scholarships.		
Abbot, ...	$150.00	
Basset, ...	63.76	
Bigelow, ...	833.34	
Bowditch, ...	5,750.00	
Browne, ...	150.00	
Class of 1802, ...	250.00	
" **1814,**	200.00	
" **1815 (Kirkland),**	250.00	
" **1817,**	200.00	
" **1835,**	150.00	
" **1841,**	175.00	
Wm. Samuel Eliot, ...	300.00	
Farrar, ...	350.00	
Greene, ...	120.00	
Levina Hoar, ...	200.00	
Hollis, ...	250.00	
Matthews, ...	4,810.05	
Morey, ...	500.00	
Pennoyer, ...	380.00	
Saltonstall, Mary and **Leverett,**	300.00	
Savage, ...	300.00	
Sever, ...	175.00	
Sewall, ...	583.34	
Shattuck, ...	1,800.00	
Slade, ...	250.00	
Story, ...	150.00	
Thayer, ...	3,600.00	
Gorham Thomas, ...	250.00	
Toppan, ...	300.00	
Townsend, ...	1,500.00	
Walcott, ...	200.00	24,490.49
Paid other Beneficiaries.		
Exhibitions, ...	684.96	
Senior Exhibition	90.00	
Samuel Ward Fund, ...	50.00	
Quincy Tufts Fund, ...	280.88	1,105.84
Prizes. **Lee** Prizes for Reading, ...	260.00	
Boylston Prizes for Elocution, ...	195.00	
Bowdoin Prizes for Dissertations	425.00	
"Deturs" from **Hopkins** Fund	346.57	1.226.57
Amount carried forward, ...		$26,822.90

TABLE II., CONTINUED.

PAYMENTS.

Amount brought forward,			$26,822.90
Salaries for instruction,			126,048.18
Repairs and improvements on College edifices not valued on Treasurer's books,			6,082.26
Botanic Garden, for labor, repairs, and materials,			4,457.94
Herbarium, " " "			1,023.85
Gymnasium, Salary of Superintendent,		1,250.00	
Repairs,		41.30	
Gas, cleaning, and sundries,		212.46	
Fuel,		59.10	
Apparatus,		25.63	
			1,588.49
General Expenses.			
Appropriations for collections and laboratories.			
Physical Apparatus (Prof. Lovering), two years,	1,432.75		
Mineral and Chemical (Prof. Cooke),	2,300.00		
Rumford (Prof. Gibbs),	300.00		
Botanical (Asst. Prof. Farlow),	13.13		
Physiological (Asst. Prof. James),	94.73		
Geological (Prof. Shaler),	212.85		
Zoölogical (Instructor Faxon),	31.49		
Fine Art (Prof. Norton & Inst. Moore),	842.33		
Physical (Asst. Prof. Trowbridge),	352.66		
		5,579.94	
Appleton Chapel. Singing, blowing organ etc.,		531.99	
Advertising,		68.01	
Blackboards,		17.40	
Books and binding,		95.52	
Cincinnati Examinations,		175.60	
Cleaning and care of College buildings not valued on Treasurer's books,		6,637.73	
College yard expenses.			
Labor and material,	2,567.37		
Manure,	64.00		
Tools, etc.,	49.03	2,680.40	
Commencement Dinner 1878,		921.17	
Dean's and Registrar's Office, stationery, postage, copying, etc.,		1,313.87	
Diplomas,		182.75	
Fuel,		1,511.88	
Furniture,		317.26	
Freight,		162.37	
Gas,		995.06	
Incidentals,		82.60	
Janitors,		1,815.00	
Amounts carried forward,		$23,088.55	166,023.62

TABLE II., CONTINUED.

PAYMENTS.

Amounts brought forward, . . .	$23,088.55	166,023.62
Mats, ...	79.70	
Music, Commencement, ...	150.00	
" Class-Day, ...	90.00	
Pews hired in Cambridge churches, ...	933.00	
Police for Commencement and Class Day, . . .	175.00	
Printing, ...	196.08	
Printing office, expenses, ...	4,828.17	
Services of examiners and proctors, ...	3,024.52	
" " undergraduates, ...	520.00	
Watchmen, ...	925.00	
Water rates, ...	349.69	
To aid in preserving the Rumford homestead, . .	100.00	
Clerk in Chemical Laboratory, ...	286.00	
Tuition in Photography, ...	50.00	
		34,795.71
Total payments, ...		$200,819.33

TABLE No. III.

THE LIBRARY.

RECEIPTS.

Income of the following Funds for the purchase of books.

Subscription for Library, ...		$623.86	
Nathaniel I. Bowditch, ...		136.42	
Denny, ...		309.12	
Eliza Farrar, ...		313.45	
Horace A. Haven, ...		158.98	
George Hayward, ...		310.11	
Thomas Hollis, ...		143.63	
Sidney Homer, ...		122.06	
Frederick A. Lane, ...		315.50	
Charles Minot. Interest, ...	22.39		
From special investment, ...	4,200.00	4,222.39	
Stephen Salisbury, ...		315.62	
Samuel Shapleigh, ...		224.79	
Charles Sumner. Interest, ...	$1,946.57		
From special investment, ...	49.07	1,995.64	
Ichabod Tucker, Interest, ...	7.03		
From special investment, ...	250.00	257.03	
Thomas W. Ward, ...		313.45	
George W. Wales. Gift,	$200.00		
Interest on unexpended balance,	25.14	225.14	
James Walker, ...		940.06	
			10,927.25
James Savage Fund for general expenses (½ of income), ...			1,080.60
Fines, &c., ...			108.15
			$12,116.00

TABLE III., CONTINUED.

PAYMENTS.

For Books from		
Subscription Fund,	$1,038.38	
Bowditch "	371.27	
Denny "	350.42	
Farrar "	411.71	
Haven "	11.55	
Hayward "	399.40	
Hollis "	252.34	
Homer "	82.68	
Lane "	491.99	
Minot "	4,545.16	
Salisbury "	474.66	
Shapleigh "	143.22	
Sumner "	2,670.64	
Tucker "	345.85	
Ward "	399.24	
Wales "	357.67	
Walker "	1,208.92	
Anonymous gift,	29.12	
Money from sales of pamphlets, duplicates. &c.	1,075.52	14,659.74
Salaries and wages,	17,929.80	
Binding,	1,097.75	
Stationery and postage,	674.60	
Fuel,	525.00	
Repairs and improvements,	1,176.74	
Freight,	159.18	
Cleaning,	327.47	
Printing,	815.94	
Furniture,	856.12	
Insurance on steam boiler,	15.00	
Incidentals,	9.00	23,586.60
		$38,246.34

TABLE NO. IV.

DIVINITY SCHOOL.

RECEIPTS.

Income of the following Funds applicable to Salaries.	
General Fund,	$1,307.25
Benjamin Bussey Professorship,	2,202.42
Parkman Professorship,	938.54
John Hancock "	352.07
Samuel Dexter,	1,188.41
Henry Lienow,	538.24
Amount carried forward,	$6,526.93

TABLE IV., CONTINUED.

RECEIPTS.

Amount brought forward,	$6,526.93	
Mary P. Townsend,	307.65	
Winthrop Ward,	123.06	
Samuel Hoar,	61.53	
Abraham W. Fuller,	61.53	
Caroline Merriam,	61.53	
Joseph Baker,	461.48	7,603.71
Income of Scholarship Funds.		
Thomas Cary,	321.13	
George Chapman,	125.11	
Joshua Clapp,	149.72	
Jackson Foundation,	739.06	
J. Henry Kendall,	155.52	
Nancy Kendall,	155.29	1,645.83
Income of other Funds.		
Joshua Clapp,	127.63	
William Pomeroy,	61.53	
Hannah C. Andrews,	30.77	
Lewis Gould,	53.38	
Interest on Beneficiary money returned,	74.66	347.97
Term Bills.		
For Instruction,	983.34	
For Rents and Furniture,	1,643.00	2,626.34
Benjamin Bussey Trust. One-fourth of net income for use of this School,		4,412.76
		$16,636.61

PAYMENTS.

For Salaries for Instruction,	$16,600.00	
Beneficiaries and services of students,	191.78	
Labor, repairs, and improvements,	953.57	
Cleaning and care of rooms, furnaces, etc.,	515.35	
Books,	200.00	
Printing,	4.50	
Fuel,	201.12	
Gas,	64.96	
Stationery, postage, and sundries,	9.48	
Water rates,	25.00	
Diplomas,	7.55	18,773.31
Paid the incumbents of the following Scholarships.		
Jackson Foundation,	780.00	
Cary,	350.00	
Chapman,	93.34	
Nancy Kendall,	140.00	1,363.34
		$20,136.65

Table No. V.

LAW SCHOOL.

RECEIPTS.

Income of the following funds.		
Law School Balance,	$522.07	
Nathan Dane,	922.95	
Benjamin Bussey Professorship,	1,405.23	
Isaac Royall,	488.78	
Benjamin Bussey Trust (½ of net income for use of this School),	4,412.76	
John Foster (income for Law students every third year),	185.88	
		7,937.67
Term Bills for Instruction,		25,333.35
For books sold from Library,		216.64
		$33,487.66

PAYMENTS.

For Salaries for Instruction,	$22,500.00	
Librarian and Assistants,	2,365.00	
Janitors,	733.32	
Books,	2,260.20	
Binding,	426.91	
Cleaning,	517.18	
Diplomas,	74.77	
Fuel,	322.84	
Furniture,	354.07	
Gas,	311.36	
Printing	248.20	
Scholarships,	800.00	
Labor, repairs, and improvements,	860.01	
Stationery and postage,	143.18	
Insurance,	200.00	
Freight,	33.30	
Advertising,	45.58	
Sundries,	25.00	
		$32,220.92

Table No. VI.

MEDICAL SCHOOL.

RECEIPTS.

Income of the following Funds.	
Medical School, balance,	$1,334.79
Jackson Medical,	1,124.71
Warren, for Anatomical Museum,	595.49
Ward Nicholas Boylston, for Medical Prizes,	228.83
Ward Nicholas Boylston, for Medical Books,	101.61
Amount carried forward,	$3,385.43

TABLE VI., CONTINUED.

RECEIPTS.

Amount brought forward,		$3,385.43	
George C. Shattuck. Interest,	407.39		
From special investment,	210.00	617.39	
Hersey Professorship, two-fifths income of the fund,		462.96	
Medical Library Fund,		118.20	
Medical School Building Fund,		1,510.24	6,094.22
From students for instruction,		40,720.00	
" " for graduation fees,		1,650.00	
" " in Chemical Laboratory, breakage and chemicals,		1,285.12	
" " in Practical Anatomy, for material,		390.00	44,045.12
			$50,139.34

PAYMENTS.

Warren Anatomical Museum.		
Expenses, and additions to collection,	86.91	
Chemical Laboratory, apparatus and chemicals,	1,884.20	
Physiological Laboratory Expenses,	400.00	
Practical Anatomy and Surgery Expenses,	1,262.30	
Microscopy Expenses,	45.13	
Obstetrics "	183.70	
Materia Medica "	60.00	
Histology "	12.20	
Salaries for instruction,	30,120.11	
Repairs and improvements,	3,045.20	
Scholarships,	800.00	37,899.75
General Expenses.		
Advertising and catalogues,	1,402.86	
Books from Library Fund,	5.00	
Cleaning,	221.44	
Clerk,	700.00	
Diplomas,	65.60	
Doorkeeper,	78.00	
Fuel,	579.34	
Gas,	457.46	
Insurance,	12.00	
Janitor,	1,273.33	
Printing,	104.50	
Rent of rooms (in part) for Pathological specimens,	200.00	
Services of Examiners,	30.00	
Stationery, postage, and sundries,	63.37	
Water rates,	95.75	
Architectural plans and estimates,	100.00	
Faculty meetings (2 years),	59.63	
Librarian (2 years),	40.00	
Rent of rooms, heating, &c. for Chemical Laboratory,	720.00	
Surveying sea wall,	49.49	6,257.77
		$44,157.52

TABLE No. VII.

DENTAL SCHOOL.

RECEIPTS.

From Students,	$2,540.00	
Infirmary,	323.20	
Laboratory,	269.52	
Rent of a part of the School building,	310.00	
		$3,442.72

PAYMENTS.

Advertising and catalogues,	$770.40	
Books,	15.45	
Binding,	7.85	
Care of operating room at hospital,	60.00	
Drugs, chemicals, and sundries,	23.82	
Diplomas,	11.50	
Fuel,	22.30	
Gas,	.45	
Gold foil and metals,	158.85	
Instruments and apparatus,	113.51	
Interest on debt,	859.18	
Printing,	39.75	
Repairs to building,	245.85	
Repairing furniture,	175.25	
Salaries for instruction,	3,008.00	
Stationery and postage,	45.90	
Taxes,	117.90	
Water rates,	12.00	
		$5,687.96

TABLE No. VIII.

LAWRENCE SCIENTIFIC SCHOOL.

RECEIPTS.

Income of the following Funds.		
Professorship of Engineering,		$2,274.09
Professorship of Chemistry,		167.65
James Lawrence. From special investment,		3,044.95
Abbott Lawrence,		3,606.01
Gray Fund for Zoölogical Museum. From special investment,		2,070.84
John B. Barringer. Interest,	1,376.34	
From special investment,	200.00	
		1,576.34
Sturgis Hooper. Interest,	2,930.00	
From special investment,	1,400.00	
		4,330.00
Amount carried forward,		$17,069.88

TABLE VIII., CONTINUED.

RECEIPTS.

Amount brought forward,		$17,069.88	
Agassiz Memorial. Interest,	16,179.46		
From special investment,	1,685.83		
		17,865.29	
Teachers and Pupils,		444.42	
Humboldt,		453.62	
Permanent Fund for Museum of Zoölogy,		6,883.67	
Agassiz Building Fund,		489.02	
			43,205.90
Term Bills, for Instruction,			4,345.00
			$47,550.90

PAYMENTS.

Paid on the order of the Faculty of the Museum of Comparative Zoölogy, from the following Funds.		
Gray,	$3,820.84	
Agassiz Memorial,	13,700.53	
Teachers and Pupils,	444.42	
Humboldt,	453.62	
Permanent,	6,883.67	
Agassiz Building Fund,	6,150.00	
		31,453.08
Salaries for instruction,	15,206.01	
Books, Engineering Department,	250.00	
Instruments and apparatus,	248.37	
Printing,	.75	
Fuel,	251.75	
Gas,	22.96	
Stationery and postage,	48.86	
Cleaning,	292.92	
Janitor,	283.32	
Labor and repairs,	323.40	
Expenses Chemical Laboratory (part),	276.34	
Scholarships,	450.00	
Interest on advances,	553.22	
Diplomas,	16.43	
Freight,	.60	
		18,224.93
		$49,678.01

TABLE No. IX.

OBSERVATORY.

RECEIPTS.

Income of the following Funds.		
Edward B. Phillips,	$6,463.23	
James Hayward,	1,230.60	
David Sears,	1,144.46	
Josiah Quincy,	624.03	
James Savage (½ of net income),	1,080.60	
Charlotte Harris,	117.20	
		10,660.12
Gift from Mrs. J. M. Forbes,	200.00	
" " T. G. Appleton,	50.00	
		250.00
U. S. Navy Department, for account of expenses in observing the transit of Mercury,		100.00
From students for instruction,		150.00
From sale of time signals,	2,742.50	
" " " Astronomical engravings,	79.00	
" " " Observatory Annals,	24.58	
		2,846.08
		$14,006.20

PAYMENTS.

Salaries and wages,	$10,385.96	
Cleaning and care of Observatory,	308.48	
Gas,	66.08	
Instruments and apparatus, including repairs on same,	1,015.17	
Repairs and improvements on buildings and grounds,	167.77	
Stationery and postage,	224.61	
Fuel,	70.25	
Books,	181.94	
Binding,	48.50	
Water rates,	14.00	
Printing,	144.40	
Expenses of time service for 1876-77,	808.46	
Freight,	106.31	
Trustees for Mrs. Winlock, ½ net income from sale of time signals,	967.02	
Chemicals and sundries,	13.39	
Expenses in observing the transit of Mercury,	187.05	
Watering streets,	22.50	
		$14,731.89

TABLE No. X.

BUSSEY INSTITUTION.

RECEIPTS.

Income of unexpended balance,	$154.53
From Bussey Trust (½ net income),	8,825.52
Amount carried forward,	$8,980.05

TABLE X., CONTINUED.

RECEIPTS.

Amount brought forward,	$8,980.05	
From Bussey Building Fund (net income),	1,573.37	
" " " " (to balance account),	978.75	
Fees for Instruction,	547.00	
Sale of grass,	15.00	
Sale of Bulletins,	36.00	
From Botanic Garden for flowers for Cambridge classes,	200.00	
		$12,330.17

PAYMENTS.

For Salaries,	12,500.00	
Chemicals and chemical apparatus,	55.49	
Books and binding,	86.20	
Stationery and postage, cleaning, gas, &c.,	84.92	
Fuel,	193.50	
Wages,	405.97	
Printing Bulletin,	220.40	
Water supply, expenses,	110.52	
Printing,	9.00	
Horticultural Department, expenses,	758.09	
Advertising,	188.00	
Repairs and improvements,	167.56	
Police,	187.50	
		$14,967.15

Bussey Building Fund.

Receipts.

Income of unexpended balance of Fund,	$798.37	
Estimated value of use of house by Prof. Storer,	775.00	
		$1,573.37

Payments.

Income carried to Bussey Institution,	1,573.37	
Bussey Institution, to cover deficit,	978.75	
		$2,552.12

James Arnold Fund.

Receipts.

Income of Fund,	$8,288.85	
Gift from Mass. Society for Promoting Agriculture,	1,000.00	
		$9,288.85

Payments.

Salary of Director,	$1,500.00	
Expenses of Arboretum,	2,000.00	
		$3,500.00

TABLE No XI.

MISCELLANEOUS FUNDS.

Bussey Trust.

Receipts.

Net income from Real Estate,		$24,551.04

Payments.

Annuities,	$6,900.00	
One-half of the remaining income to Bussey Institution,	8,825.52	
One-quarter " " " Divinity School,	4,412.76	
" " " " " Law School,	4,412.76	
		$24,551.04

Gray Fund For Engravings.

Receipts.

Income from special investment,	$940.91	
Interest on balance of Fund,	293.00	
From sale of Catalogues,	121.50	
		$1,355.41

Payments.

To the Treasurer of the Museum of Fine Arts,		$1,223.55

Annuity Funds.

Receipts.

Gore, income,	$1,310.06	
Mary Osgood, income,	417.64	
Lucy Osgood, income,	766.90	
Anonymous Observatory, income,	720.00	
		$3,214.60

Payments.

Gore, annuities,	$1,200.00	
Mary Osgood, annuity,	360.00	
Lucy Osgood, annuities,	780.00	
Anonymous Observatory, annuity,	720.00	
		$3,060.00

Daniel Williams Fund.

Receipts.

Interest on Fund,		$951.02

Payments.

Treasurer of Herring Pond Indians,	$346.26	
" " Mashpee Indians,	692.55	
		$1,038.81

Sarah Winslow Fund.

Receipts.

Interest on Fund,		$285.68

Payments.

Minister at Tyngsborough, Mass.,	$151.31	
Teacher at " "	151.31	
Commission on income credited to University,	7.75	
		$310.37

TABLE XI., CONTINUED.

James Savage Fund.

Receipts.

Interest on Fund, ...		$2,461.20

Payments.

Scholarship, ...	$ 300.00	
One-half the remaining income to Library, ...	1,080.60	
" " " " Observatory, ...	1,080.60	
		$2,461.20

Charles Sanders Bequest.

Receipts.

Interest on unexpended balance, ...	$3.64

Payments.

To Building Committee of Memorial Hall, ...	$146.05

Gospel Church Fund (accumulating). Interest on Fund, . . .	$112.69

Suspense Account.

Receipts.

Temporary advance for foreign books, repaid, ...	$570.58

Payments.

To Income account, surplus of 1876-77, ...	$65.28

Sundry Accounts.

Receipts.

Advances to Dental School, from "general investments,"	$2,245.24	
" " Observatory, " " "	749.67	
Income account, balance for 1876-77, ...	65.28	
Gain from sale of securities, ...	450.00	
		$3,510.19

Payments.

Advances to Lawrence Scientific School repaid, . . .	$931.63	
Annuity for Class of 1802, ...	170.00	
Cost of new Library extension, charged off, ...	89.012.68	
Advances for books, repaid to "general investments,"	505.30	
		$90,619.61

GENERAL SUMMARY OF THE TABLES.

Table		Receipts.	Payments
Table I.	University,	33,258.13	41,092.67
Table II.	College,	231,107.15	200,819.33
Table III.	Library,	12,116.00	38,246.34
Table IV.	Divinity School,	16,636.61	20,186.65
Table V.	Law School,	33,487.66	32,220.92
Table VI.	Medical School,	50,139.34	44,157.52
Table VII.	Dental School,	3,442.72	5,687.96
Table VIII.	Lawrence Scientific School,	47,550.90	49,678.01
Table IX.	Observatory,	14,006.20	14,731.89
Table X.	Bussey Institution,	12,330.17	14,967.15
	Bussey Building Fund,	1,573.37	2,552.12
	James Arnold Fund,	9,288.85	3,500.00
Table XI.	Bussey Trust,	24,551.04	24,551.04
	Gray Fund for Engravings,	1,355.41	1,223.55
	Annuity Funds,	3,214.60	3,060.00
	Daniel Williams Fund,	951.02	1,038.81
	Sarah Winslow Fund,	285.68	310.37
	James Savage Fund,	2,461.20	2,461.20
	Charles Sanders Bequest,	3.64	146.05
	Gospel Church Fund,	112.69	
	Suspense Account,	570.58	65.28
	Sundry Accounts,	3,510.19	90,619.61
		501,953.15	591,266.47
			501,953.15
Net decrease of the Funds and balances, excluding gifts for capital account, as also shown on page 23,			$89,313.32

ANNUAL REPORTS

OF THE

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OF

HARVARD COLLEGE.

1878-79.

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PRESIDENT'S REPORT FOR 1878-79.

To the Board of Overseers:—

The President of the University has the honor to submit the following Report for the academic year 1878–79; namely, from September 26, 1878, to September 25, 1879:—

On the 6th of January, 1879, the University sustained a great loss by the death, after a brief sickness, of Dr. J. B. S. Jackson, Professor of Morbid Anatomy since 1847, and senior professor in the Medical School. Curator of the Warren Museum of Anatomy for thirty-two years, he greatly enlarged and enriched that collection by his own indefatigable labor; his influence with the medical profession in New England was wide and good; throughout a long and active life he studied and taught with an admirable scientific enthusiasm which he communicated to many of his pupils; and above all, his character and life illustrated the inestimable worth of simplicity, sincerity, and uprightness.

Not quite four weeks after the last Commencement Day, died Mr. James Winthrop Harris, the College Secretary. With characteristic devotion to duty, he had struggled against pain and feebleness for several months, doing his work with his usual forethought, punctuality, and diligence, but with increasing effort and suffering. When he had finished the labors of the term, and discharged his habitual functions on Commencement Day, he went home, never again to go out of doors. Mr. Harris had been in receipt of a salary from the College for the last nineteen years, and he had been much employed in the Library and the President's office during fifteen years before. Of all the officials of the University he was the best known to officers and students; and no one knew him but to respect him. Whatever he undertook was sure to be done; and whatever he did, he did well. The service which he rendered to the University was intelligent, disinterested, and hearty. Always frugal, conservative, and reasonable in his desires, he felt a cheerful satisfaction in his daily work, and his life grew more and more prosperous to its peaceful close.

RESIGNATIONS.

Gerrit S. Sykes, Proctor, October 7, 1878.

Willis A. Kingsbury, Proctor, October 7, 1878.

Louis D. Brandeis, Proctor, November 11, 1878.

John Fiske, Assistant Librarian, to take effect April 1, 1879, January 13, 1879.

Charles S. Bradley, Bussey Professor of Law, to take effect at the end of the academic year, March 10, 1879.

James B. Ames, Professor of Law, April 9, 1879.

Charles B. Porter, Demonstrator of Anatomy, to take effect September 1, 1879, May 12, 1879.

George T. Moffatt, Professor of Operative Dentistry, June 30, 1879.

Winslow Upton, Assistant at the Observatory, as of date September 1, 1879, September 22, 1879.

By the resignation of Hon. Charles S. Bradley, Bussey Professor of Law since September 1, 1876, the Law School lost the services of one whose professional eminence and large experience in affairs lent weight to his teachings, and whose cordial liking for young men made him a sympathetic and inspiring instructor. Unable to withdraw himself from an engrossing practice, Judge Bradley found the double work of a practitioner and a professor too much for his strength, and reluctantly came to the decision that he must resign his professorship. The Law School can congratulate itself that it has had the benefit of Judge Bradley's co-operation for six years in all, three as professor and three as lecturer.

The Corporation is under great obligations to Dr. George T. Moffatt, who, on the occasion of his departure for Paris, resigned in June last the professorship of operative dentistry, in which he had labored, almost without compensation, for eleven years. Dr. Moffatt was the first professor of that important department of the Dental School, and his standing as a well-educated and skilful practitioner contributed very much to establish the reputation of the School.

APPOINTMENTS.

[UNLIMITED, OR FOR TERMS LONGER THAN ONE YEAR.]

Reginald H. Fitz, to be Professor of Pathological Anatomy, November 25, 1878.

William Cook, to be Assistant Professor of German for five years from September 1, 1879, March 31, 1879.

James B. Ames, to be Bussey Professor of Law, April 9, 1879.

William G. Farlow, to be Professor of Cryptogamic Botany, April 9, 1879.

Charles S. Sargent, to be Arnold Professor of Arboriculture, June 30, 1879.

Josiah P. Cooke, Jun., to be Director of the Chemical Laboratory, July 28, 1879.

Luther D. Shepard, to be Professor of Operative Dentistry, August 18, 1879.

Henry B. Hill, to be Assistant Professor of Chemistry for five years from September 1, 1879, August 18, 1879.

Dudley A. Sargent, to be Assistant Professor of Physical Training and Director of the Hemenway Gymnasium for five years from September 1, 1879, September 22, 1879.

Le Baron R. Briggs, to be Tutor in Greek from September 1, 1878, October 7, 1878.

George R. Briggs, to be Tutor in Mathematics for three years from September 1, 1878, November 25, 1878.

Henry N. Wheeler, to be Instructor in Mathematics from September 1, 1878, October 7, 1878.

William M. Davis, to be Instructor in Geology for three years from September 1, 1879, June 30, 1879.

Ko Kun-hua, to be Instructor in Chinese for three years from September 1, 1879, September 22, 1879.

Henry H. A. Beach, to be Demonstrator of Anatomy for five years from September 1, 1879, May 12, 1879.

William A. Bancroft, to be Proctor, October 7, 1878.

Sumner B. Stiles, to be Proctor, December 9, 1878.

Henry W. Torrey, Ezra Abbot, Wolcott Gibbs, Francis J. Child, Charles E. Norton, and **George L. Goodale**, to be members of the Council of the Library for three years from January 1, 1879, December 30, 1878.

Samuel H. Scudder, to be Assistant Librarian, February 24, 1879.

William F. Whitney, to be Curator of the Warren Anatomical Museum, April 14, 1879.

[FOR ONE YEAR OR LESS.]

For 1878–79.

George F. Grant, to be Demonstrator in Mechanical Dentistry, October 7, 1878.

Henry F. Dunkel, to be Demonstrator in Operative Dentistry, October 7, 1878.

Henry G. Carey, to be Instructor in Singing, December 30, 1878.

Hugh McCulloch, to be Lecturer on Finance, February 24, 1879.

Charles F. Folsom, to be Lecturer on Mental Diseases, February 24, 1879.

Alfred W. Field, to be Assistant in Chemistry, November 25, 1878.

Nathaniel D. C. Hodges, to be Assistant in Physics, November 25, 1878.

William H. Melville, to be Assistant in Mineralogy, November 25, 1878.

Charles F. Mabery, to be Assistant in Chemistry, November 25, 1878.

Robert W. Greenleaf, to be Assistant in Botany, November 25, 1878.

For 1879–80.

Isaac T. Hoague, to be Instructor in the Constitutional History of the United States, April 9, 1879.

Henry Howland, to be Instructor in Torts, April 9, 1879.

Edward Burgess, to be Instructor in Entomology, May 26, 1879.

Charles F. Folsom, to be Lecturer on Hygiene and on Mental Diseases, June 9, 1879.

Frank W. Draper, to be Lecturer on Forensic Medicine, June 9, 1879.

George F. H. Markoe, to be Instructor in Materia Medica, June 9, 1879.

Henry P. Quincy, to be Assistant in Histology, June 9, 1879.

Elbridge G. Cutler, to be Assistant in Pathological Anatomy, June 9, 1879.

Edward N. Whittier, to be Assistant in Clinical Medicine, June 9, 1879.

George M. Garland, to be Assistant in Physiology, June 9, 1879.

Thomas Waterman, to be Assistant in Anatomy, June 9, 1879.

Maurice H. Richardson, to be Assistant in Anatomy, June 9, 1879.

Francis B. Greenough, to be Clinical Instructor in Syphilis, June 9, 1879.

Samuel G. Webber, to be Clinical Instructor in Diseases of the Nervous System, June 9, 1879.

Edward Wigglesworth, to be Clinical Instructor in Syphilis, June 9, 1879.

Clarence J. Blake, to be Clinical Instructor in Otology, June 9, 1879.

John O. Green, to be Clinical Instructor in Otology, June 9, 1879.

James J. Putnam, to be Clinical Instructor in Diseases of the Nervous System, June 9, 1879.

Joseph P. Oliver, to be Clinical Instructor in Diseases of Children, June 9, 1879.

Thomas M. Rotch, to be Clinical Instructor in Diseases of Children, June 9, 1879.

Charles E. Faxon, to be Instructor in Botany, June 25, 1879.

Lester S. Ford, to be Demonstrator of Zoölogy, June 25, 1879.

Howard M. Ticknor, to be Instructor in Elocution, June 30, 1879.

Charles P. Ware, to be Instructor in English, June 30, 1879.

Thomas S. Perry, to be Instructor in English, June 30, 1879.

James L. Laughlin, to be Instructor in Political Economy, June 30, 1879.

Giorgio A. C. Bendelari, to be Instructor in Modern Languages, June 30, 1879.

George Riddle, to be Instructor in Elocution, June 30, 1879.

Joseph H. Allen, to be Lecturer on Ecclesiastical History, June 30, 1879.

Arthur T. Cabot, to be Instructor in Oral Pathology and Surgery, June 30, 1879.

Benjamin M. Watson, to be Instructor in Horticulture, June 30, 1879.

Edward L. Mark, to be Instructor in Zoölogy, June 30, 1879.

Simon Newcomb, to be Lecturer on Political Economy, September 22, 1879.

William S. Fenollosa, to be Instructor in Music during the absence of Professor Paine, September 22, 1879.

Henry G. Carey, to be Instructor in Vocal Music, September 22, 1879.

George F. Grant, to be Demonstrator of Mechanical Dentistry, September 22, 1879.

Henry F. Dunkel, to be Demonstrator of Operative Dentistry, September 22, 1879.

John T. Codman, to be Clinical Instructor in the Dental School, September 22, 1879.

Samuel F. Ham, to be Clinical Instructor in the Dental School, September 22, 1879.

Timothy O. Loveland, to be Clinical Instructor in the Dental School, September 22, 1879.

Charles Wilson, to be Clinical Instructor in the Dental School, September 22, 1879.

Albert B. Jewell, to be Clinical Instructor in the Dental School, September 22, 1879.

Edwin P. Bradbury, to be Clinical Instructor in the Dental School, September 22, 1879.

Alphonso M. Weeks, to be Proctor in the Divinity School, June 30, 1879.

Amory T. Gibbs, to be Secretary of the College for one year from September 1, 1879, July 28, 1879.

William Gray, Henry J. Bigelow, and **Thomas G. Appleton**, to be Trustees of the Museum of Fine Arts for one year from January 1, 1879, November 25, 1878.

In April, 1879, the Corporation and Overseers adopted an amendment of the University statute concerning degrees, to the effect that there shall hereafter be four grades of the degree of Bachelor of Arts, instead of two, and two grades of the degree of Bachelor of Laws, instead of one. This change was made at the instance of the College Faculty and the Law Faculty. In the Law School two courses of study had been arranged, each conducting to a degree, and each affording a comprehensive and thorough training; but one, called the honor course, more difficult than the other. The Faculty desired that graduates who accomplished the honor course with credit should receive a degree *cum laude*. In the College, the Faculty had adopted, after long debates, new regulations concerning Commencement honors, which involved the institution of four grades of the degree of Bachelor of Arts. The objects of the Faculty were, first, to increase considerably the number of Commencement honors, and, secondly, to make them attainable either by excellence in a wide range of studies, none of which need be carried far, or by excellence in one subject pursued quite beyond the elements, and respectable attainments in a moderate range of less advanced studies. It had been observed that the number of parts at Commencement, which twenty-five years ago was generally about half the number of the graduating class, had in late years been reduced, by changes in the regulations governing the assignment of parts, to twenty or thirty for classes of one hundred and fifty to two hundred members. The institution of "honors," obtained by severe special examinations, had, to be sure, supplied in the mean time a new and valuable incentive; but these "honors" had not proved in practice to be accessible to any considerable number of persons. It was the desire of the Faculty to at least double the number of distinctions for good scholarship which the Commencement programme records; and it was believed that the new regulations would have this effect. The Corporation and Overseers, sympathizing with the general purposes of the Faculty, readily assented to the establishment of three grades of the degree of Bachelor of Arts, superior to the ordinary degree. These three grades will be distinguished by the words, *cum laude*, *magna cum laude*, and *summa cum laude* respectively. An increase in the number of honorary distinctions for scholarship, accessible alike to rich and poor, had become the more desirable, because of the publication in the annual catalogue since 1878 of the names of the holders of scholarships. The number of honorary distinctions of various kinds, offered under the new regulations to ambitious students at their graduation, will be from two to three times the number of scholarships held in each class. The competition for scholarships is strenuous, but is necessarily limited to those who need pecuniary aid. The competition for second-year honors, final honors, Commencement parts, and the especially honorable grades of the degree is unrestricted. Any undergraduate who desires distinction may win it, if he can, and the Faculty hope that at least a quarter of each class will win distinction of some sort. The details of the new regulations will be found in the subjoined report of the Dean of the College Faculty, together with an interesting exposition of the motives and purposes of the Faculty in adopting them (p. 72).

During the past ten years the number of candidates for admission to the Freshman class has slowly increased, though not regularly, from year to year. When the number and nature of the changes made in the requisitions for admission during this period are considered, this fact will be found very satisfactory. It has been surprising to see how quickly the high schools, endowed academies, and private schools, which habitually or frequently prepare boys for this college, have accommodated their methods and their courses of study to the new requisitions of the Faculty. The English requisition, first enforced so lately as 1874, has met with universal approval. The requisition in French or German, first enforced in 1875, has been fairly complied with, apparently without serious difficulty. The examinations in Latin and Greek at sight, which make part of the new method of admission adopted in 1876–77, can be avoided, in Latin until 1881, and in Greek until 1883; but they have so commended themselves to the teachers of preparatory schools as fair tests of the acquaintance of their pupils with those languages, that out of 284 candidates for admission to the Freshman class in 1879, 179 chose to be examined in Latin at sight, and about 150 in Greek; while at the preliminary examination of 1879, out of 245 candidates, 215 were presented upon the new method, and of these 215 only 8 chose to avoid the Greek examination at sight. The new requisition in science, first enforced in 1876, has been met moderately well to all appearance; yet this is undoubtedly the requisition which in its practical working has given the least satisfaction to the Faculty and the schools.

The options introduced into the admission examination have tended to enlarge still further the work of the preparatory schools. The first option, announced in 1870–71, was limited to a substitution of certain advanced mathematical subjects for portions of the classical authors and for writing Latin and Greek. But in 1876–77 the Faculty very much improved and extended this original option, by adopting a system under which every candidate is required to pass an examination upon a minimum requisition in all the preparatory studies, and a further, or maximum, requisition in at least two out of the four departments, Latin, Greek, Mathematics, and Science. This free choice of two out of these four departments, made by the candidates or their teachers, has three effects: First, it makes a college education somewhat more accessible to young men for whom Latin and Greek are less profitable studies than mathematics and science; secondly, it widens the range of studies in the preparatory schools, to their great advantage; and thirdly, it obliges the College to furnish in the Freshman year instruction adapted to the wants of students who enter upon the minimum requisition in each of the four departments, as well as instruction adapted to the wants of those who enter upon the maximum. In the Dean's Report (p. 68) will be found a very interesting table showing the use made of this liberty of choice by the candidates under the new method in 1878 and 1879. It appears from this table that in 1878 the maxima in Latin and Greek were offered by 84 per cent of the candidates, and by 69 per cent in 1879. Undoubtedly the full effect of the options is not yet developed; for in both these years a large proportion of the candidates under the new method had begun their preparation under the old. The same table suggests that the maximum requisition in Physics is not equivalent, as it should be, to the maxima in Latin, Greek, and Mathematics respectively.

Since the Report of the year 1873–74 inclusive, the report of the Dean of the College has contained each year the statistics of the failures in each subject at the admission examination. Whoever examines carefully these returns will receive the impression that the preparatory schools are, on the average, weakest in their mathematical, scientific, and English teaching. As regards mathematics and science this state of things is to be accounted for by the fact that it is but a small proportion of professional teachers who have any natural aptitude for teaching these subjects, while only the largest and best organized schools can afford to have a special master for them. The neglect of English is of such long standing, that the subject cannot be brought up in six years to its proper place in the secondary schools. The schools which feed the College must have time to exact from the lower schools a better teaching of English than they have heretofore supplied.

The secondary schools of New England are greatly impeded in their development, and distracted in their work by unmeaning and unnecessary diversities in the admission requisitions of the principal New England colleges. Undoubtedly substantial differences exist, and must continue to exist, among the colleges in regard to the qualifications of the students whom they are willing to receive; but this necessary diversity need not prevent the adoption of uniform definitions of the requisitions, and a common standard of examination, in those subjects or parts of subjects which the colleges agree in prescribing. Thus one college demands French or German for admission and another does not, or one college demands the whole of plane geometry and another only a part, or one demands six orations of Cicero and another eight; but these diversities need not prevent the adoption of a common standard of examination upon the four books of Cæsar which both require, or upon that part of plane geometry and those six orations of Cicero which both require. Co-operation among the New England colleges to these ends would be very helpful to secondary schools, and would strengthen the colleges themselves in the public regard.

Nearly three-sevenths of the candidates annually examined for admission to Harvard College are fitted for college at private schools or by private teachers. About two-sevenths come from high or public schools, and about the same proportion from endowed academies and schools. About one-twentieth of the whole number come from other colleges. Of late years the endowed schools and academies have been slowly gaining upon the public schools in the number of candidates presented, and in the quality of the training given to their pupils. The facts concerning these two classes of preparatory schools which were brought out by the admission examination of 1879 are given in the following table: —

Candidates from	Examined.	Admitted.	Rejected.	Admitted clear.	Admitted with Conditions.	Average No. of Conditions.
Endowed schools and academies .	79	70	9	28	42	$3\frac{1}{42}$
Public or high schools	77	74	3	22	52	$3\frac{73}{104}$

The admission examinations of the University were held at Chicago, as well as Cincinnati, in June, 1879. Several requests have been received that these examinations be held in other more distant places, where immediate supervision by a College officer would be impracticable; but the Faculty is of opinion that it is not expedient to hold their examinations anywhere except under the direction of a disinterested College examiner, intimately acquainted with all the details of the examinations as they are conducted at Cambridge. The practice of conducting admission examinations at remote points, in order to save for the candidates their travelling expenses, which was instituted by Harvard College in 1876, has proved to be of great convenience for candidates, and of some service to preparatory schools within easy reach of the points at which examinations are held. Yale College promptly adopted the idea, and now holds formal examinations, like those of Harvard, both at Cincinnati and Chicago; while several other New England colleges are in the habit of forwarding their examination-papers to friends in distant cities, who conduct examinations on their behalf. The practice in its best form might easily be considerably extended.

After long discussions during the year 1878–79, the Faculty at length saw their way to remove the prescribed logic and metaphysics from the Junior year, and the prescribed history from the Sophomore year. The arguments which prevailed with the Faculty are clearly presented in the report of the Dean (p. 69). There now remain no prescribed exercises in the last three years of the College course, except the study of rhetoric and the writing of themes and forensics. This prescribed study of English must remain in the course until the secondary schools relieve the College of it; but the study of rhetoric and the elementary drill in writing ought to be moved back into the Freshman year. The natural reluctance of the Latin, Greek, and mathematical departments to give up any part of the time now allotted to them in the Freshman year prevents the adoption of this improvement. Under the present arrangement such attention as the Freshman had given to the study of English at the school from which he came is intermitted for a year.

Without adding to the cost of the instruction, the Faculty made, during the year, several substantial improvements in the list of elective studies, particularly in the departments of philosophy, political economy, history, and natural history. A few new courses were introduced in these and other departments, but the chief improvement was the more systematic arrangement of progressive courses in all the departments. The revision of the list of studies was, on the whole, the most thorough which has ever been made.

The Faculty also adopted, in 1878–79, a permanent division of the hundred or more elective courses of instruction into thirteen groups. The motives and effects of this great improvement in the elective system are fully described in the report of the Dean (p. 53). The new arrangement, which seems at first sight to diminish the student's liberty of choice, really increases it; for the proposed permanence of the grouping permits the student to lay out beforehand a three years' course of study with the certainty that he will not be prevented, by new conflicts of weekly appointments or of examinations, from pursuing the subjects of his deliberate choice. In the earlier years of the elective system, and so long as the number of courses was comparatively small, it was possible to construct, after the students' choices were made, a tabular view of daily appointments which accommodated almost all the various choices; but as the number of elective courses increased, it became more and more difficult, and finally quite impossible, to do this. For two or three years the Faculty had seen with concern that the elective system was falling into some confusion, but had not discerned the remedy. They owe their extrication from this embarrassment in great part to the penetration and perseverance of Instructor S. M. Macvane, who first mastered the difficulties of the situation and then found the way out of them. The number of the groups is practically determined by the number of hours used for recitations and lectures during the week, which is at present thirty-four. The number of elective courses can be hereafter increased, without abridging the present liberty of choice, by putting each new course into an existing group in which it is not likely to interfere with the courses already composing the group selected, or by putting new courses at hours not now occupied, such as 8 A.M. and 1 P.M. If eight hours should be used on six days of the week, — which is by no means impracticable, — at least five new groups could be made. As eight incompatible courses can generally be found for each group, it is obvious that there will be room, under the general plan adopted, for a large extension of instruction.

There is no reason why Saturday should not be used precisely like any other day. Every student and every instructor may well have one or more free afternoons, or free days, in the week; but there is no good reason why all the students and all the instructors should have the same afternoon, or the same day, free. On the contrary, a grave abuse has grown out of the traditional disuse of the Saturday hours. Many of the students whose homes are within fifty miles of Cambridge go home on Friday afternoon or Saturday morning, and do not return to Cambridge until Monday morning. A large proportion of those who thus go home every week do no real studying while they are absent from Cambridge. High scholarship is not to be won on such easy terms. The serious student should regard the days or weeks in term-time, when regular lectures, recitations, and laboratory-work are intermitted, as time to be used for reading, writing, and converse with comrades in intellectual pursuits. The summer vacation is, in itself, a quarter of the year; to take vacation in addition during one-third of each of the other weeks in the year, means to use but half of the year for work.

It is also an important advantage of the permanent grouping of the elective courses, as the Dean points out, that the semi-annual periods of examination, which have for several years trenched very seriously upon time which was needed for instruction, will be reduced within reasonable limits.

The average membership of the Dining Hall Association during the year 1878–79 was 638, and the average weekly price of board was $4.06. The total charges against members for articles ordered in addition to the regular fare was $6,230.25, or about 33 cents a week, on the average, for each member. More than one-half of these extra charges occur in the last third of the year, partly because variety is craved in the later months of the year, and partly because May and June are the months when fresh fruits can be had upon order. The membership was larger than ever before, and at the beginning of the year many students applied for admission who could not be received. At the beginning of the current year nearly one hundred more persons applied for admission than the tables accommodate. The number of seats in the hall has been already increased from five hundred to six hundred and fifty, and cannot be further increased without impairing the comfort of all who board there; for the number of waiters is already quite as great as can work to advantage in the space provided for the service, and the passages between the tables are none too large. On the other hand, an increase in the membership is sure to be advantageous; because the fixed charges, such as the payments for interest, reduction of the debt, fuel, gas, and water, are made divisible among a larger number of persons, and the increase in the cost of provisions and in wages is by no means proportional to the increase in the number of members. The best solution of this problem is to be found in the provision of two sets of meals each day, one set consisting of breakfast from seven to eight o'clock, luncheon from twelve to one, and dinner from five to six, and the other of breakfast from eight to nine o'clock, luncheon from one to two, and dinner from six to seven, each member being required to choose one set, and as a rule to confine himself thereto. For some years to come, the hall would probably not be full at either set of meals, so that the service would be better, the cooking to order prompter, the noise and confusion less, and the general comfort greater than at present. A majority of the students would prefer the later set of meals; but a large number would elect the earlier, particularly in the spring and autumn. Permanent improvements were made in the equipment during the past summer at a cost of about $1,100. Throughout the five years of its existence the Dining Hall Association has been completely self-supporting. It has met all its expenses, maintained and insured its stock and apparatus, paid for all improvements out of current receipts, paid a fair rate of interest on all advances made by the College, and reduced its debt by $5,500.

From the beginning of the year 1879–80, after due notice given early in 1878–79 to all students who occupied College rooms, all the buildings were placed in charge of janitors, who receive from the College fixed wages and the exclusive privilege of making fires, blacking boots, bringing water, and so forth, at a fixed price for those students in their respective buildings who wish to employ some one to do this work for them. This system, copied from Little's Block and Beck Hall, where it had worked well, was tried in Holyoke House and Matthews Hall during 1878–79, and was found to be so great an improvement on the former system, that it has been extended to the other buildings, with confidence that it will soon commend itself to their occupants. The janitors, with such assistance as they themselves hire, take the whole care of the buildings, and perform, either personally or by deputy, all the service which is required by the students. The buildings are cleaner than before; they are better protected from pedlers and thieves; and the work done for the students is done at a lower price than the "scouts" formerly charged. It had become quite impossible longer to give free access to the College buildings, by night and by day, to a large number of servants, hired by the students without much caution, and under no responsibility whatever to the College. Repeated efforts had been made to bring them under some wholesome regulation, but without success.

The degrees of Doctor of Philosophy and Doctor of Science were instituted in 1872, and were first conferred in 1873. As these degrees were intended to foster advanced study, and particularly to promote the development of a class of specialists and highly trained teachers, the University public has a legitimate interest in the subsequent career of the gentlemen who obtain these degrees. The names and present occupations of the persons who have received one or other of these doctorates are given in the following table: —

1873.

Doctors of Philosophy.

William Elwood Byerly,	**In Mathematics,**	**Asst. Prof. of Mathematics, H. U.**
Charles L. B. Whitney,	**" History,**	**Counsellor at Law, Boston.**

Doctor of Science.

John Trowbridge,	**In Physics,**	**Asst. Professor of Physics, H. U.**

1875.

Doctors of Philosophy.

William K. Brooks,	In Natural History,	Associate in Zoölogy, at the Johns Hopkins University.
William Everett,	„ Philology,	Master of Adams Academy, Quincy.
Stuart Wood,	„ Political Science,	In business in Philadelphia.

1876.

Doctors of Philosophy.

Lucius H. Buckingham,	In Philology,	Master in the English High School, Boston.
Robert Grant,	„ „	Studied Law, taking the LL.B. in 1879.
James L. Laughlin,	„ History,	Instructor in Political Economy, H. U.
Henry Cabot Lodge,	„ „	Author and Editor, Boston.
Ernest Young,	„ „	Holds a fellowship in H. U.

Doctor of Science.

Nathaniel S. Shaler,	In Natural History,	Professor of Palæontology, H. U.

1877.

Doctors of Philosophy.

Jesse W. Fewkes,	In Natural History,	Student of Natural History.
Frank A. Gooch,	„ Chemistry,	Assistant in U. S. Geological Survey.
Freeman Snow,	„ History,	Holds a fellowship in H. U.
John W. White,	„ Philology,	Asst. Professor of Greek, H. U.

1878.

Doctors of Philosophy.

Franklin Bartlett,	In History,	Counsellor at Law, New York City.
Edward R. Benton,	„ Natural History,	Student of Geology.
Edward A. Birge,	„ „ „	Instructor in Natural History, University of Wisconsin.
Grenville Stanley Hall,	„ Philosophy,	Now studying in Europe.

Doctors of Science.

Walter Faxon,	In Natural History,	Instructor in Zoölogy, H. U.
Byron D. Halsted,	„ „ „	Asst. Editor of the "American Agriculturist," New York City.
Charles S. Minot,	„ „ „	Student of Physiology.

1879.

Doctors of Philosophy.

Melville M. Bigelow,	In History,	Lecturer on Law in Boston University, and Author.
Marshman E. Wadsworth,	„ Natural History,	Assistant in the Museum of Comparative Zoölogy, H. U.

Doctor of Science.

Leonard Waldo,	In Mathematics,	In charge of the Horological Bureau of Yale College.

In the last annual Report the inadequacy of the endowment of the Divinity School was set forth with some detail, and it was stated that an addition of at least $127,000 to its endowment was urgently needed. Early in the spring of 1879 a subscription was begun, under the direction of an influential committee appointed at a public meeting held in the First Church of Boston. The fruits of their labors to this date (Jan. 9) are $85,593.25 paid in, $6,200 subscribed in the form of annual payments and not yet due, and about $9,000 promised, but not yet actually subscribed or paid. Of this very large contribution to the resources of the school, $40,000 came from the family of the late Thomas Tileston, of New York, and $10,000 from Mr. Henry P. Kidder, of Boston, who has repeatedly testified his interest in the University by large gifts to its various departments. The liberal terms upon which the Tileston endowment was given will be found in the letter of the Rev. H. W. Bellows, which accompanied the gift (App. I.). The list of subscriptions paid before Sept. 1, 1879, is printed in the Treasurer's Statement (p. 7).

The manifestation of interest in theological instruction by the authorities of the University, and their acceptance of money for the better endowment of the existing professorships which are at present grouped in the Divinity School, has awakened some adverse criticism, based partly on a general objection to training ministers of any sort at the University, and partly on the assumption that it is impossible to teach Christian dogmatic theology to any purpose in a university which declares itself unsectarian, without impairing public confidence in the genuineness of the impartiality which the institution professes. The public utterance of this well-meant criticism, coming as it undoubtedly does from friends of the College, shows that it is desirable to state anew the historical and actual position of the University with regard to theological learning.

Before proceeding to this restatement, however, it is important to observe that, as regards the appropriateness to university instruction of the subjects ordinarily, though inaccurately, designated as theological, the grounds for any difference of opinion whatever among men of learning are very narrow. These subjects are by common consent as liberal and as unsectarian as chemistry, philosophy, or history, with the exception of Christian dogmatic theology, which is quantitatively a very small proportion of their enormous mass. Thus, Hebrew, Arabic, and other Oriental languages, ecclesiastical history, the literature and criticism of the New Testament, ethics, natural theology, philosophy in its relation to religion, ethnic religions, and the history of religions are all, when properly defined and treated, matters of pure science, which, in every university worthy of the name, should be studied not only by persons who expect to make a professional use of them, but also by young men, graduates or undergraduates, who pursue them as elements of liberal culture. The expediency of grouping the professorships which deal with these subjects into a separate organization called a Divinity School may, perhaps, be reasonably questioned, either now or hereafter, as it has been repeatedly in the past; but it cannot be doubted that the subjects themselves possess an exalted and enduring intellectual interest which make them necessary parts of a comprehensive scheme of university instruction.

Using the word " theology " in that broad sense which includes all the scientific subjects above enumerated, it is an indubitable fact that Harvard University has been thoroughly committed these many years to the maintenance of instruction in theology. The institution was originally established largely for the sake of training ministers: the first professorship founded in it was a professorship of divinity (the Hollis professorship, 1722); the Hancock professorship of Hebrew and other oriental languages (one of those for which additional endowment has lately been sought) dates from 1765; the Dexter lectureship on biblical literature (another of the endowments to be increased) was created in 1811; and the Parkman professorship was originally endowed — very inadequately — in 1815. All these still existing endowments antedate the organization of the separate Divinity School in 1815–19, and would remain in possession of the Corporation, though the kindred trusts later accepted on behalf of the Divinity School should be transferred to other hands. The successful movement made in 1815, "for increasing the means of theological education at the University," proceeded directly from the Corporation itself; and at various subsequent times the Corporation accepted bequests and gifts, large and small, for the support of theological education under their administration. In 1852, the College proper having been for thirty years in a somewhat unprogressive state, which gave solicitude to its friends, and to its enemies grounds of public attack, the Corporation and Overseers decided to apply to the Supreme Court for leave to transfer to other hands their trusts for the support of theological education. A separation of the Divinity School from the College was sought under a bill in chancery. The case was thoroughly argued by Messrs. Charles G. Loring and W. H. Gardiner for the College, in March, 1855, no counsel appearing in opposition to the bill. In the following November the Court, by Mr. Justice Dewey, gave an elaborate decision, reviewing all the facts of the case, and denying the prayer of the Corporation.* Since this adjudication the President and Fellows have repeatedly accepted gifts for the benefit of the Divinity School or for the promotion of theological education under their direction.

It is obvious that under these circumstances the Corporation do not, and cannot, regard the question of maintaining theological instruction in the University as an open one. They have too lately been authoritatively instructed as to their duties in that regard. It is their plain duty to administer their trusts on behalf of theological learning with the same fidelity and zeal with which they strive to discharge their functions in relation to other branches of learning.

If the legal duties of the Corporation are plain, the spirit in which they have discharged, and propose to continue to discharge them, is fortunately not less so. The constitution of the Divinity School expressly prohibits the application of any sectarian test whatever, either to teachers or students. A student of theology may enter the school, receive its scholarships if he need and deserve pecuniary aid, and win its honors, without an inquiry being made as to what he believes or does not believe, or as to what religious organization he belongs to or proposes to join. Greater freedom cannot be secured. It is, in truth, this absolute freedom which makes the school, at present, peculiar among theological schools, and practically unserviceable to the vast majority of young men who prepare for the ministry. The fact of this peculiarity and this consequent unserviceableness is to-day indisputable, but it is the result of causes quite beyond the control of the University; it is not a fact inevitable and permanent in its nature, for freedom in theological study may commend itself to more general acceptance; and, moreover, it in no way affects the legal duties of the Corporation.

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* "In view of all the facts before us, the Court are of opinion that they cannot, in the proper exercise of any chancery powers they possess, direct the withdrawal of the funds above described, and others of like character, from the supervision and trust of that permanent public corporate body to which they were intrusted by their donors for the purpose of maintaining a Theological School as a branch of the University, and commit them to an independent board of trustees, to be appropriated to maintaining a separate Theological School. We feel constrained, therefore, to deny the prayer of the complainants for a change in the trust in relation to this public charity.

"A contrary decision would furnish a precedent dangerous to the perpetuity and sacredness of all our great public charities, leaving the question of the management and supervision of our public charities to be the subject of change with every fluctuation of public opinion as to what may be the more expedient and useful mode of administering them. *Bill dismissed.*"

From the opinion of the Supreme Judicial Court, delivered by Mr. Justice Dewey, at November Term, 1855, in the case of *Harvard College* v. *Society for Promoting Theological Education.*

The spirit or atmosphere of a school conducted on these principles can never be satisfactory to sects which believe that the acceptance of certain dogmas is of vital importance; but to these very sects a university which includes a theological department conducted on these principles may well be more acceptable than one which banishes theology completely from its precincts.

Some instruction is given in the Divinity School, as in all theological seminaries, which is of a professional rather than of a scientific character, resembling in this respect much of the instruction given in schools of law, medicine, engineering, and architecture. Of this character is the instruction in sermon-writing, extemporaneous speaking, and elocution. It, of course, presents no difficulty whatever from the point of view of sectarianism; but it has been objected to in some quarters on the broad ground that it is no part of the business of the University to give a technical training to ministers. The doctrine that professional studies are not liberal, and that consequently a university should have nothing to do with them, has often found advocates, but at present is not accepted in practice by any civilized nation.

That a special application of this doctrine to the clerical profession alone can be acceptable to the authorities and constituency of Harvard University, will not be anticipated by any person who is familiar with the history of the institution, who remembers the inestimable services which the New England ministry has rendered to education during seven generations, or who appreciates the immense influence of the clerical profession at the present day.

There are some grounds for thinking that the University has already passed through the period of greatest difficulty in the administration of its trusts for the promotion of theological study. Several reasons which had weight in inducing the Corporation and Overseers to apply to the Supreme Court in 1852 have ceased to exist. The official connection between the State and the College, which seemed to them a serious complication, no longer exists. The constitution of the Board of Overseers, which at that time was productive of many embarrassments, has been changed, and now presents no difficulty whatever. Most important of all, the allegation then made that the College was suffering seriously from the mere presence of the Divinity School could not now be plausibly supported. In 1852 the College had not enjoyed any marked prosperity for many years; but ever since the close of the civil war the College proper, and indeed the whole University, has thriven to an unprecedented degree, doubtless from the concurrent operation of many complex causes; and particularly the College proper has received incessant marks of public confidence and approval, both in pecuniary gifts and legacies, and in the resort to it of large numbers of young men whose parents are of every religious persuasion, from the Israelite to the Roman Catholic. Furthermore, during the past twenty-five years the bitterness of sectarian strife has somewhat abated, and the dividing lines between sects have been much obscured. It is sometimes alleged that this cessation of controversy is one of the signs of a general public indifference to theological subjects. The existence of wide-spread indifference to theological learning is not to be lightly taken for granted. Through constant changes in the direction of interest and in the field of actual debate, theological themes remain the themes of supreme interest to thinking men; but did real indifference ever prevail, then especially it would be for the University, as a school of general learning, to foster theological study pursued with a scientific method and with perfect freedom from sectarian dogmatism.

It was another interesting event in the Divinity School during 1878–79 that the Faculty carried into practice the policy of refusing pecuniary aid to unpromising students.

As has been repeatedly the case in former years, half the instructors in the School are now laymen.

The year 1878–79 was an exceptional one in the Law School; for there was no third-year class, and yet the second-year class was not entitled to take the degree, because the new requisition of three years of study was already in force. The following table shows that the establishment of an admission examination for persons who hold no literary or scientific degrees, and the requirement of three years of study before taking the degree of the School, have together had, in 1876–79, not so much effect in reducing the number of students as the lengthening of the course of study from eighteen months to two years and the reconstruction of the course had in 1870–73. These great improvements in the School have been carried out at a small and temporary sacrifice. There was an excess of expenditures over receipts during 1878–79; but this deficit is more than covered by the reserves made in the two preceding years expressly to provide for this emergency. During the current year the number of students is larger than in 1878–79; the expenditures have been somewhat reduced; and there will be no deficit.

Year.	No. of Students.	Year.	No. of Students.
1869–70	120	1874–75	139
1870–71	154	1875–76	161
1871–72	134	1876–77	187
1872–73	118	1877–78	189
1878–74	188	1878–79	160

The endowment of the Law School is deplorably small. The Bussey professorship is the only one which is substantially endowed. To put the Dane, Royall, and Story professorships upon a sound footing would require, in addition to the two small funds which now exist, not less than $225,000. The Library has no endowment whatever. The Dean calls attention in his report (p. 83) to the inadequacy of Dane Hall for the uses of the School.

The prosperity of the Medical School continues and increases. In 1878–79 the number of students increased ten per cent, and the excess of receipts over expenditures was $9,540.07, although each of the clinical instructors received an honorarium, which was a new charge upon the School. The Dean's report contains interesting statistics concerning the admission examination, and the annual examinations upon the studies of the School. It also gives some very encouraging facts about the previous education of the students, and the length of time which on the average they now spend in the School. Thus it appears that 88 per cent of the class which graduated in 1879 had spent three whole years in the

School, whereas only 5 per cent of the class which graduated in 1872 had done as much. The number of students who possess literary or scientific degrees has doubled in ten years, and now amounts to 48 per cent of the whole number.

The most interesting transaction of the year was the discussion in the Board of Overseers and the Medical Faculty on the admission of women to the School. Early in May, the joint committee of the Corporation and Board of Overseers, to whom the proposition of Miss Marian Hovey, Trustee, had been referred in the preceding year (Report for 1877–78, p. 48), presented a majority and a minority report to the Board of Overseers. The majority, consisting of Alexander Agassiz, Chairman, Morrill Wyman, Charles W. Eliot, and J. Elliot Cabot, recommended that, after the completion of the new building for the School, women be admitted, as an experiment only, for ten years, or so long as their admission does not, in the opinion of the governing boards, conflict in any way with the best interests of the School, but nevertheless upon the following conditions: That they be not less than twenty-two years of age; that the same requisitions be made of them as of men; that for personal instruction in laboratories, and for recitations, the two sexes be separated; that complete separation be made in such subjects as obstetrics, the diseases of women, and certain portions of anatomy and physiology; and that about $65,000 be provided to cover the cost of the experiment during ten years, the whole principal to be expended. The minority, Dr. Le Baron Russell, while agreeing with the majority that the means for a thorough medical education should be provided for women, was of opinion that this object would best be attained by the establishment of a separate medical school for women, which might, or might not, be conducted by the University.

The conclusions arrived at in each of the reports were supported by arguments at some length. These reports, having been read and discussed at a meeting of the Board of Overseers early in May, were printed, and informally communicated to the members of the Medical Faculty. Thirteen months earlier, the Faculty had had the proposition of Miss Hovey before them, at a single meeting, and without prolonged discussion had passed, by a considerable majority, the following resolution: "The Faculty record their opinion in favor of offering the advantages of the Harvard Medical School to women on equal terms with men, provided a sufficient sum of money can be obtained to warrant the Corporation in so doing." To the majority of the Faculty a permanent fund of $200,000 seemed no more than a sufficient sum to guarantee the School against loss from the irrevocable admission of women. During the summer of 1878 the committee of the Corporation and Overseers procured from each member of the Medical Faculty an expression in writing of his individual opinion upon the subject. It appeared from these letters that there were many shades of opinion in the Faculty, and the committee had great difficulty in forming a clear conception of the state of mind of the body. After the majority and minority reports of the joint committee had been received by the members of the Faculty, a special meeting of the Faculty was held on the 24th of May, with the specific purpose of putting before the two governing boards a clear expression of the opinion of the body, — an opinion formed fourteen months from the time of their first consideration of the subject, and in the light of much discussion, both public and private. At that meeting the following resolution was adopted by a vote of thirteen ayes to five nays: "Whereas the Medical Faculty are now engaged in radically changing the plan of study in the School, —

an undertaking which will require several years for its completion, and will demand all the time and ability of the teachers which are available for the purpose, — we deem it detrimental to the interests of the School to enter upon the experiment of admitting female students." This vote being communicated to the Overseers at a meeting of the Board on May 27th, the majority of the joint committee withdrew their recommendations, and proposed the adoption of the following vote: "In view of the state of opinion in the Medical Faculty, the Overseers find themselves unable to advise the President and Fellows to accept the generous proposal of Miss Marian Hovey." The Board first amended this vote by striking out the clause which precedes the words "the Overseers," and then adopted it. Thereupon the President of the University, in order to procure an expression of the views of the Board itself upon the general subject, proposed the adoption of the following vote: "That, in the opinion of the Board of Overseers, it is expedient that, under suitable restrictions, women be instructed in medicine in the Medical School." This vote was first amended so as to read "instructed in medicine by Harvard University in its Medical School," and then adopted by a decided majority. Upon the 23d of June following, the Corporation passed the following vote: "That while the President and Fellows recognize the importance of providing thorough medical education for women, they do not find themselves able, under existing circumstances, to accept Miss Hovey's generous proposal." The passage of this vote disposed of the subject so far as the offer of Miss Hovey was concerned; but the prolonged discussion was, nevertheless, not without fruit. It is obvious that both the governing boards are in favor of giving medical education to women in the University under suitable restrictions; and it is also apparent that the reasons given by the Faculty for not admitting women to the School are temporary in their nature.

Since these transactions, the Councillors of the Massachusetts Medical Society have taken action which goes far to prove that the majority of the medical profession recognize the fact that there is a legitimate demand and an appropriate field of work for well-educated female physicians. At their meeting of Oct. 1, 1879, it was voted, yeas 48, nays 32: "That the Councillors instruct the Censors of the Society to admit females to examination as candidates for admission to Fellowship." This action cannot but suggest the inquiry whether it be expedient that Harvard University should make no provision for educating a class of persons who are admissible as members of so ancient and respectable a professional body as the Massachusetts Medical Society.

The Dental School incurred no deficit in 1878–79; but only because the instructors worked without compensation. In each of the three years, 1875–78, the School incurred a serious deficit; so that the debt due from the School to the treasury of the University — which is but partially secured — increased from $11,918.29 on Aug. 31, 1875, to $16,564.84 on Aug. 31, 1878. In the eleven years of its existence the School has never received from the profession or the public any endowment. Considering the nature and extent of the services which the dental profession is constantly rendering to the well-to-do part of the community, it is a curious fact that no money gift has ever been made to the School. Its resources are the tuition-fees of its students, and the devotion of its teachers. By constantly improving the instruction, and raising the requisitions for the degree, the Faculty have made the School thoroughly creditable to the profession and to the University; and this they have done at the sacrifice of their own immediate pecuniary interests.

The future of the Lawrence Scientific School is not so clear as could be wished, in spite of its considerable endowments and the large resources of the scientific establishments which are accessible to its students. The number of its students diminishes from year to year, although the courses of instruction offered are various, ample, and well-planned, the instructors numerous and eminent in their several departments, the conditions of admission reasonable, and the requisitions for graduation severe enough to make the degrees given by the School highly honorable. During the year 1878–79, the Faculty again revised all the courses of study, with the intent of reducing the amount of daily work demanded of the student, which had proved to be excessive. They also endeavored to make attractive provision for special students,—that is, for persons who wish to study one subject, or two or three kindred subjects, without aiming at a degree. Of late years the School has been drained in several ways. The institution in 1872 of the degrees of Doctor of Philosophy and Doctor of Science, under the charge of the Academic Council, deprived it of a small class of advanced students, who formerly gave it dignity. The opening of the elective courses of instruction in Harvard College, since 1876, to unmatriculated students not less than twenty-one years of age, deprived the School of another class of students who formerly resorted to it. Again, the long-continued depression in the industries which demand engineering and chemical skill has reduced the number of students preparing themselves for the scientific professions. Finally, it is probable, though not demonstrable, that the great expansion of the elective system in the College proper since 1869 has had some effect to diminish the resort to the School; because students of scientific tastes are almost as well able to follow their inclinations in the College, after the Freshman year, as they would be in the Scientific School. The most effective reinforcement which the School could now receive would be the endowment of a professorship of architecture.

The Museum of Comparative Zoölogy is regarded as a part of the Lawrence Scientific School, because its founder, Professor Louis Agassiz, was professor of geology and zoölogy in that School from the time of its original organization, and there made the beginnings of the collections which have now become so vast. Nevertheless, the Museum to-day serves fifty College students for one Scientific student; and its special students have lately been for the most part candidates for the degree of Doctor of Philosophy or Doctor of Science. The subjoined report of the Curator (p. 123) will be found full of interest. It describes the accessions of the year 1878–79, the good progress made in arranging the collections, the scientific work done, the instruction provided, the successful dredging operations of the Curator during the winter of 1878–79 in the U. S. Coast Survey steamer "Blake," and the important publications which were issued during the year. One important fact concerning the administration of the Museum is not mentioned in the Curator's report, namely, that in order to maintain the present large scale of expenditure at the Museum, Mr. Agassiz draws heavily every year upon his private fortune.

The Bussey Institution gains slowly in the number and quality of its students, and its staff of teachers was never so strong as it is now; but its pecuniary condition was never so bad as during the current year. Its income from the Bussey Trust Fund, which was $17,155.92 in 1875–76, fell to $8,902.98 in 1876–77, to $8,825.52 in 1877–78, and to $5,113.35 in 1878–79. During the current year it is estimated that the income of the Institution from the Bussey Trust Fund will not exceed $4,000. Out of this income, $3,000 are to be paid in execution of a contract to the instructor in farming. The working expenses of the Stone Building, the greenhouses, and the dissecting-room will probably absorb the tuition-fees and the balance of the income of the Trust Fund; so that Professor Storer will be left without compensation, except the use of the house which belongs to the Institution, while Professor Slade will have no compensation at all. Mr. Charles E. Faxon, newly appointed Instructor in botany, and Mr. Edward Burgess, newly appointed Instructor in entomology, have consented to serve without pay. From private sources very small salaries have been provided for Mr. Benjamin M. Watson, Instructor in horticulture, and Mr. Lester S. Ford, Demonstrator in anatomy.

This state of things — so humiliating to the Corporation and so embarrassing to the immediate sufferers — is not likely to last. It is hardly credible that so large a diminution of net income, as has been suffered during the past four years upon the real estate in which the Bussey Trust is invested, should be permanent, and it is to be observed that the Trust is now charged with annuities to the amount of $6,900. The present evil is in part a consequence of that far-reaching disaster, the Boston Fire of 1872; for when the Corporation began to organize the Bussey Institution in 1870, the Bussey Trust had a considerable interest in the general investments of the University ($80,489.45, Aug. 31, 1870), so that the Fund was not, as now, exclusively invested in real property used for business purposes. As the

Corporation did not think it proper to give to the principal of the Bussey Trust any share of the proceeds of the Fire Subscription, although more than half of the buildings burnt belonged to that Trust, the whole of the Bussey interest in the general investments was expended in rebuilding at the high prices of 1873, and $40,000 besides were borrowed from the Treasury, on which interest has to be paid.

The present condition of the Institution is a severe lesson on the danger of attempting to support permanent charges upon an income derived from local investments all of one kind, and also on the extreme imprudence of the testator who undertakes to dictate the investments in which his money shall be placed through all time, or even through so short a period as forty years. Another more general lesson can be learned from the recent experience of the Corporation at the Bussey Institution,— namely, the imperative need of a large contingent fund, the income of which can be used at the discretion of the Corporation, now for this purpose, now for that, in any department of the University which is temporarily embarrassed or depressed. A department which, like the College, the Law School, and the Medical School, is supported mainly by its tuition-fees, is liable to be distressed by any cause, either from within or from without, which temporarily diminishes the number of students. On the other hand, a department which, like the Library, the Bussey Institution, the Observatory, and the Museum of Comparative Zoölogy, is dependent mainly or wholly upon the income of endowments, is subject to grave embarrassments from any external cause which reduces the income of special investments, or the average interest upon the general investments. In such cases of temporary embarrassment the Corporation are now completely helpless. They are powerless to avert the injury which is inflicted upon the whole University by serious, though temporary, reverses in any one of its departments; they cannot contend against that sense of general instability which such reverses are calculated to inspire; they cannot prevent frequent breaks in the continuity of the development of the various departments, although that continuity is essential to economy of administration, to robustness of growth, and to the dignity of the University.

The degree of Bachelor of Agricultural Science was conferred for the first time at Commencement, 1879, and upon a candidate of distinguished merit. There is at present a tendency among the students of the Institution to pursue zealously veterinary studies. Some of the students, to this end, attend courses of instruction at the Medical School, in addition to their courses at the Institution. Should this tendency continue and increase, the Corporation may think it expedient to institute some veterinary degree.

The accumulation of the Arnold Arboretum Fund to $150,000, as prescribed in the indenture under which the Fund was received (Report for 1871–72, p. 77), was completed in 1878–79, and nineteen-twentieths of the income of the Fund may hereafter be expended for the purposes of the Trust. During the past seven years the Arboretum has received large pecuniary support in various ways from the Bussey Institution, of which it is a department; but the diminished resources of the Institution made the continuance of that support impossible. The income of the Arnold Fund becoming available most opportunely, the Corporation were enabled to appoint Mr. Charles S. Sargent, who has been Director of the Arboretum from its beginning, Arnold professor of arboriculture, upon a salary derived wholly from the Arnold Fund. The change in Mr. Sargent's title involves no change in his duties.

Professor Sargent calls attention in his report (p. 100) to the grant of $2,500 which he received in 1878–79 from the Trustees of the Massachusetts Society for Promoting Agriculture. In every year since 1871 inclusive, the Trustees of this ancient society have devoted from $2,500 to $3,500 of their income to the furtherance of agricultural or horticultural science at the Bussey Institution, the Arnold Arboretum, or the Botanic Garden. These repeated gifts have been exceedingly welcome to the President and Fellows, whose own resources are quite insufficient for the adequate support of these departments, and it is hoped that they have not been without effect in advancing the sciences and arts which it is the object of the Society to promote.

The subjoined report on the Library (p. 101) will give a vivid impression of the vigorous growth of that central department of the University, and of the activity which pervades all branches of its administration. The publications of the Library have never before been so numerous and serviceable; the work of arranging the books by subject on the shelves of the new book-room has gone forward with reasonable rapidity; the accessions of the year have been larger than ever; and the use made of the Library has increased.

But while the Library is prosperous, so far as a vigilant, liberal, and hard-working internal administration can make it prosper, it is necessary to point out an evil which is felt more and more, impairing its usefulness and hindering its growth. The cost of its administration and service falls wholly upon the College, since the Library has no endowment of its own except for the purchase of books. Whenever the Corporation feel anxious about the College finances, they inevitably bethink themselves of the Library as the first place in which to cut down expenses. Four times within ten years the President has been instructed to request the Librarian to reduce the running expenses of the Library, because the College had incurred, or was threatened with, a deficit. The continuity of the work in various departments of the Library has been repeatedly interrupted under such circumstances in a wasteful and most vexatious manner, and the activity of the officials has been diverted into other, perhaps private, channels. Thus the Library Bulletin, which was enlarged in 1877–78, and had begun to interest students and bibliographers, was, in 1878–79, reduced to an inconsiderable bulk, in order to save the cost of printing. The Library should possess permanent funds for salaries, cataloguing, and bibliographical printing. As the funds for the purchase of books, now in hand, or soon to become available, will yield at least $12,000 a year, it is desirable that the attention of friends of the Library should be directed to the fact that the need of funds to maintain the administration and service is more urgent than the need of more funds for books.

On the 30th of December, 1878, the Corporation, on recommendation of the Council of the Library, adopted new rules concerning the use of the Library by persons not connected with the University (App. II.). It was the general purpose of these rules to put an end to the gratuitous borrowing of books, except by scholars known to be pursuing systematic investigations in some department of knowledge. Graduates of the University, and other persons properly introduced, can borrow books on payment of $5 a year; and any person may use books within the building.

In this connection it may be remarked that the Corporation desire to put an end, as fast as natural occasions for change arise, to the rendering of gratuitous services on the part of the University, and to the gratuitous distribution of printed documents, except by way of exchange with other institutions of learning, or of presentation to libraries, learned societies, officials, and benefactors. Some steps have been already taken in this direction. For example, as large an edition of the annual catalogue is now sold as was formerly distributed gratuitously.

The Director of the Observatory has the pleasure of reporting (p. 112) that the subscription of $5,000 a year for five years, begun in 1877–78, was completed in 1878–79. This large and seasonable gift will enable the staff of the Observatory to make adequate use of all the instruments, to push forward rapidly the reduction of old observations, as well as of new, and to print and publish a large amount of interesting work. It is gratifying evidence of the readiness with which cultivated people enter into a genuine scientific enthusiasm, and unite to further its ends.

The plans for Sever Hall were prepared in the winter of 1878–79 by Mr. H. H. Richardson, under the direction of a committee of the Corporation, consisting of the Treasurer and Mr. Adams. In the spring the contract was awarded to Messrs. Norcross Brothers, of Worcester, and in May the work was begun. Before winter the masonry was finished and the building roofed in. The contract provided that the Hall should be finished on

April 1st, but the committee have decided to give the contractors more time, in order to obtain better work. The building will be occupied at the beginning of the next academic year. It is 176 ft. 4 in. long by 74 ft. 4 in. wide, and contains

Two lecture-rooms, 71 ft. × 33 ft., with seats for 300–350 persons.
Eight rooms, 33 ft. × 28 ft., with tables for 60–70 persons.
Twelve ,, 22 ft. × 28 ft., ,, ,, 40–45 ,,
Two ,, 24 ft. × 24 ft., ,, ,, 40–45 ,,
Twelve ,, 16½ ft. × 28 ft., ,, ,, 25–30 ,,
And an examination-room, 70 ft. × 52 ft.

The arrangement of the rooms suggests the permanent assignment of a set of three connecting rooms of different sizes to each department which has use for so many, in order that the books of reference and the illustrative material used in each department may be kept together, and used in common, so far as is desirable, by all the instructors. Such a set of rooms will be very convenient for each of the following departments: Latin, Greek, French, Italian and Spanish, German, English, history, and philosophy. Great pains have been taken by the committee with the arrangements for lighting and heating, and it is hoped that all the rooms will prove to be amply lighted and well ventilated. For ten years past the instruction of the College has been much impaired, and both teachers and students have suffered many annoyances and discomforts, from the lack of lecture and recitation rooms. For these evils Sever Hall will provide a complete remedy. It is the most welcome of gifts. The will of Mrs. Sever (App. III.) gave to the Corporation, not only the $100,000 for the building itself, but also an unrestricted fund of $20,000, the income of which will go far to pay the annual expenses of the building, and a fund of $20,000 for the purchase of books.

The Hemenway Gymnasium was made over to the College in October last, but was not opened for use until after the Christmas recess just past. The building is very handsome and substantial within and without, and is highly creditable to its architects, Messrs. Peabody and Stearns, and to its builders, Messrs. Norcross Brothers. In September the Corporation, who had had the matter under advisement for several months, appointed Dr. Dudley A. Sargent, of New York, Assistant Professor of physical training, and Director of the Hemenway Gymnasium. It was the purpose of the Corporation in making this appointment to put the department, for the accommodation of which Mr. Hemenway had so superbly provided, into the hands of a man of medical education, who was also practically familiar with every kind of bodily exercise and athletic sport. As it was Dr. Sargent's wish to provide the Gymnasium with apparatus made under his immediate direction, some of which was of his own designing, Mr. Hemenway very generously gave to the College $3,000 to cover the cost of all the apparatus required for the building, that sum being considered by Dr. Sargent sufficient for the purpose. It has taken nearly three months to make and put up the apparatus; but those who have been impatiently waiting to occupy the building will undoubtedly be reconciled to the unavoidable delay by the excellence of the result. The Corporation will make every effort to carry on the Gymnasium in a manner consistent with the completeness and elegance of the building and its appointments.

The Herbarium Building at the Botanic Garden was much improved during the summer of 1879 by adding to it a fire-proof room for books, and protecting its wooden cornice with a casing of copper. Professor Gray planned these improvements and supervised their execution, having previously obtained from generous friends the sum of

$4,500 to defray their cost. The list of subscribers will be found in the Treasurer's Statement (p. 9). Later in the year Professor Goodale built, chiefly at his own expense, a new propagating-house for the service of the Garden. During the early months of 1879 the Corporation had under consideration a subject which had previously been suggested to them several times, but had never been fairly taken up for discussion and settlement, — namely, the policy of ultimately removing the Botanic Garden and the Herbarium to the Bussey Institution, in order that all the botanical and horticultural establishments of the University might there be united. After thorough discussion the Corporation came unanimously to the conclusion which is recorded in the following vote under date of March 10th: "Voted, that the Botanic Garden, with its Herbarium, Library, and other appliances for investigation and instruction, shall be regarded as permanently established at Cambridge." The historical development of the department, and the wishes of its professors, had undoubtedly some influence towards the adoption of the above vote; but the determining consideration was the impolicy of separating botany from the other branches of natural history which are taught in the University. Since 1872 the Garden had been under the direction of Mr. Sargent, who, being at the same time Director of the Arnold Arboretum, was able to make each establishment help the other. The Garden has been greatly improved while under his charge, and it was not an unnatural idea that an association which had temporary conveniences might prove permanently advantageous. At the close of the year 1878–79, however, when Mr. Sargent assumed the professorship of arboriculture, the Corporation restored the Garden to the charge of the professor of botany, its most natural guardian. As has already been mentioned, Mr. Sargent had, during his administration of the Garden, considerable sums at his disposition in addition to the income of the endowment. His administration, therefore, sets for his successors an example of activity and progress. To put the Garden upon a firm basis, a large addition to its endowment is needed. This additional endowment the professors of botany have now set earnestly about procuring, with good prospects of efficient support in their endeavors.

Under the will of the late George Bemis, of Newton, the President and Fellows received a bequest of $50,000 for the establishment and maintenance of a professorship of public or international law in the Law School (App. IV.). The bequest has already been paid; but for the present the whole income is to be applied to the payment of a life-annuity. The need of an endowed professorship of this important subject has been repeatedly mentioned in these Reports; but Mr. Bemis had anticipated the want, and seven years ago made provision to supply it. The fact that his own studies lay much in the direction of public law makes his benefaction more interesting and acceptable, because thoroughly understood by him in its wide uses and results.

In 1868 a subscription of about $3,000 was raised to provide lectures at Harvard College on "the practical affairs of business, the mutual relations and interests of capital and labor, and the development of national resources," and the money was left in the hands of William Gray, Treasurer, subject to the control of a committee of the subscribers, consisting of Messrs. William Gray and J. Ingersoll Bowditch. No use was ever made of this fund until the year 1878–79, when, under an agreement made between the committee and the Corporation in 1877, the Hon. Hugh McCulloch gave a course of seven lectures on Finance in the Sanders Theatre. This course was followed in December last by a course on Taxation, delivered by Professor Simon Newcomb. It is proposed to expend the whole fund, principal and interest, for lectures on any of the subjects above mentioned, to be open to members of the University and the public. The two courses delivered in 1879 were of high character, and were listened to by interested audiences.

In connection with the promotion of Dr. Wm. G. Farlow to a professorship of cryptogamic botany, the Corporation had occasion to consider, in March, 1879, the policy of the University in regard to the ownership of a private collection by a professor who, in virtue of his position, would naturally be the creator or custodian of a University collection of the same nature. On reviewing their own experience and that of other institutions, the Corporation arrived at the following conclusions: First, that an instructor in any branch of science, who had no collection when he entered the service of the University, should not become the owner of a collection while in the service; secondly, that the owner of a scientific collection, on entering the service of the University at the regular salary of his grade, should dispose of his collection, either by gift or by sale, to the University or some other purchaser; thirdly, that when the owner of a collection enters the service at a salary confessedly inadequate and exceptional, and is unwilling to part with his collection, lest his chances of obtaining a better position elsewhere should be impaired, the Corporation should enter into a special agreement with him in writing, touching the disposition of his collection and of the increase thereof while he is in the service of the University, in the case of his withdrawal from the service. These conclusions are based upon the general principle that the curator of a collection belonging to the University ought not to be simultaneously interested in a collection of his own. The Corporation are, however, compelled to acknowledge that the strict application of this principle, though highly desirable, may be sometimes out of their power, through lack of means to pay an adequate salary, or to buy the collection of a desirable candidate for a scientific position.

In 1877, Mr. Francis P. Knight of Boston, who had been many years a resident of China, being for some months in this country, raised a subscription of $8,750 (mostly payable by annual instalments), for the purpose of maintaining at Cambridge, for a term of five years, a native teacher of Mandarin Chinese. Returning to China in 1878, Mr. Knight endeavored to find some educated Chinese gentleman willing to go to Cambridge on this service. After having been long unsuccessful in this search, he finally, in June, 1879, engaged the services of Mr. Ko-Kun-hua of Ningpo, for three years from Sept. 1, 1879. Mr. Ko reached Cambridge with his family punctually at that date, and has already justified in every respect the selection made by Mr. Knight on behalf of the President and Fellows. Mr. Knight and the Corporation have been greatly assisted in this exceptional undertaking by Mr. E. B. Drew and Mr. H. Ballou Morse, graduates of the College, who have been employed for several years in the customs service of China, and by Mr. Walter C. Hillier, interpreter at H. B. M. Consulate at Pekin. Each of these gentlemen supplied elaborate instructions for students concerning the best way of learning Mandarin; and Mr. Drew, who is stationed at Ningpo, was much relied on by Mr. Knight in selecting Mr. Ko. The University is under obligations to all these gentlemen for their disinterested labors, and also to the subscribers who responded to Mr. Knight's appeal in 1877. But for their enterprising liberality the experiment could not have been tried.

The present needs of the University, as regards buildings, are three: first, a new Law School; secondly, a laboratory of physics; and thirdly, a building for the accommodation of the department of fine arts. These structures might be detached, or grouped under one roof. The Dean of the Law Faculty has stated fully the grounds of the demand for a new building for the Law School. The physical department has a strong claim for laboratories, cabinets, and lecture-rooms expressly designed for its use. In consequence of the makeshifts to which the College has been obliged to resort for several years past in the lack of lecture and recitation rooms, the department of physics is now divided between two buildings, neither of which is well adapted to its peculiar wants. This division is a serious hindrance to efficiency. Moreover, a modern physical laboratory requires so many special constructions in the building itself, that a good one can hardly be made in an old building not designed for such uses. The department of fine arts needs a large lecture-room, and, in immediate connection therewith, exhibition-rooms for small typical collections of ancient and modern art in all departments, and properly lighted rooms for drawing and painting. In the satisfaction of the legitimate wants of this department, several other departments are greatly interested, notably the Classical and historical departments. All these structures should be as nearly fire-proof as possible, because of the valuable collections which they would contain.

The future prosperity of the University depends greatly upon the ability of the Corporation to pay adequate salaries, and upon their wisdom in regulating the scale of compensation and the steps of promotion from the bottom to the top of the service. Although twenty-five years have seen great changes in the compensation of the University teachers, it will be noticed on an inspection of the following table that during the past ten years salaries have been almost stationary. It is plain that the subject of salaries must soon engage very seriously the attention of the governing boards.

Year.	College.			Law School.	Divinity School.
	Professor.	Asst. Prof.	Tutor.	Professor.	Professor.
From Sept. 1, 1853	$1,800	. . . .	$645	$3,000	$2,000
„ „ 1854	2,000	. . . .	645	3,000	2,200
„ „ 1855 to Aug. 31, 1858	2,200	. . . .	645	3,000	2,200
„ „ 1858 „ „ 1860	2,200	$1,200	645	3,000	2,200
„ „ 1860 „ „ 1864	2,400	1,200	800	3,000	2,400
„ „ 1864	2,600	1,300	900	3,000	2,600
„ „ 1865	3,000	1,700	900	3,000	3,000
„ „ 1866	3,200	2,000	1,000	3,000	3,200
„ „ 1867 to Aug. 31, 1869	3,000	1,875	1,000	3,750	3,000
„ „ 1869	4,000	2,000	1,000	3,750	3,000
„ „ 1870 to Aug. 31, 1875	4,000	2,000	1,000	4,000	4,000
„ „ 1875 „ „ 1879	4,000	2,000	1,000	4,500	4,000

The salary of $1,800 for the regular College professor dates from the year 1838–39. Before that date it had been $1,500 for a long term of years. The salary of $3,000 in the Law School dates from 1845–46. In July, 1875, the Corporation fixed the salary of an assistant-professor in his second term of five years at $2,500 a year. The institution, in 1858, of the grade of assistant professor has been of great benefit to the University, because it has been the means of procuring the services of a large number of excellent teachers at a low rate of compensation; but it has also had the effect of diminishing seriously the probable average earnings of the teacher who passes his life in the service of the University. Most of the present professors, who have been long in the service, became full professors before they were thirty years old, and so received the maximum salary offered by the College at an early age. The institution of the grade of assistant professor has made this early accession to a full professorship very improbable. At present, a young man can hardly expect to become a professor on the full salary before he is thirty-five years of age, except by some rare piece of good fortune; and, at the existing rate of promotion, he may easily be forty years old before he obtains the salary of $4,000. It is obvious that these new conditions modify very much the meaning of the fact, made evident in the above table, that the regular professor's salary has doubled since 1854. Moreover, although the prices of food, clothing, and fuel have not advanced in proportion to the advance in salaries, the general scale of living in the community at large has greatly changed; so that the relative position of an assistant professor who lived on $2,500 in 1879 was by no means as good as that of a full professor who lived on $2,200 in 1859.

Two changes in the scale of salaries are clearly to be recommended: First, an increase of the regular professor's salary to $4,500; and, secondly, an increase of the salary of an assistant professor in his second term to $3,000. If, in addition, the Corporation had the means of promptly advancing through the regular grades every meritorious and successful teacher, the service of the University would be much more desirable than it now is. A promising tutor, for example, should never be obliged to serve a second term as tutor at a salary of $1,000; but upon the expiration of the statutory term of three years, he should be promoted to an assistant professorship at a salary of $2,000. These moderate and much needed improvements could not be made by the Corporation without an addition of about $25,000 a year to their present income applicable to salaries. The only thing now to be done is to state as forcibly as possible these urgent wants, in the sure hope that the means of doing what is just and expedient will in time be provided.

The President is of opinion that the interests of the whole University would be greatly subserved by the establishment, simultaneously with the next advance in salaries, of a judicious system of retiring annuities, or pensions. For some months past a discussion of various methods of securing to University officials the right of retirement upon an annuity provided during the period of active service, has been going on in the Corporation and among the members of the permanent service of the University; but as yet no conclusions have been arrived at. A few interesting points have, however, been already determined. In the first place, it would be regarded as a boon by a large part of the teachers and other servants of the University, if the Corporation would undertake to invest and hold their annual savings for them, under close restrictions as to the withdrawal of deposits thus made. Secondly, the privilege of retirement, in a normal and predetermined way, upon an annuity or pension, provided during active service, would be very welcome to most professors by the time they reach sixty-five years of age. Some old professors would like to stop teaching altogether and enjoy a well-earned repose; others wish to devote their ripest years exclusively to scientific or literary labor; while others would gladly give up a part, though not the whole, of their work, if they were entitled to a retiring annuity to supplement their reduced salary. Thirdly, a compulsory system of providing retiring annuities by annual reserves from salaries, supplemented by annual appropriations from the treasury, commends itself to eight tenths of the present members of the staff, but appears seriously objectionable to another tenth, and is a matter of no interest to the remainder. The chief reasons for the adoption of some good system of retiring annuities in the University are these: First, it would add to the dignity and attractiveness of the service, by securing all participants against the chance of falling into poverty late in life, or of seeing an associate so reduced; secondly, it would provide for participants the means of honorable ease, when the capacity and inclination to work abate; thirdly, it would promote the efficiency of the service by enabling the Corporation, without inflicting hardship, to relieve from active duty officers whose powers are impaired by age; lastly, it would accomplish the very important object of making promotion through all the grades of the service more rapid than it can be in the absence of such a provision. The Corporation propose to pursue the study of this interesting subject.

It will be seen in the Treasurer's Statement for 1878–79 that the liberality of the community constantly augments the resources of the University, and that the Corporation have not failed to keep good every thing which has been intrusted to their care.

The usual information concerning the degrees, honors, and prizes given by the University will be found in the Appendix (V.–VIII.), together with a list of the examining committees appointed by the Board of Overseers for 1878–79 (IX.). The attention of the Overseers is invited to the following reports from the Deans of the several Faculties, the Librarian, the Directors of the Observatory and the Botanic Garden and Arnold Arboretum, and the Curator of the Museum of Comparative Zoölogy.

CHARLES W. ELIOT, *President.*

CAMBRIDGE, Jan. 9, 1880.

REPORTS

OF THE

DEANS OF THE FACULTIES, OF THE LIBRARIAN, AND OF THE DIRECTORS OF THE OBSERVATORY, BOTANIC GARDEN AND ARBORETUM, AND MUSEUM OF COMPARATIVE ZOÖLOGY.

To the President of the University: —

Sir, — As Dean of the College Faculty, I have the honor to submit the following Report upon the administration of Harvard College during the academic year 1878–79: —

The number of undergraduates at the beginning of the year was eight hundred and nineteen, showing no material change in numbers down to the end of the period of financial depression from which the country has suffered so severely. The changes of all kinds in the composition of the College classes, from October, 1878, to October, 1879, were as follows: —

Present Oct., 1878.		Left the Class.	Admitted Oct., 1879.	Present Oct., 1879.	
Seniors	200	Class Graduated.	8	Seniors	171
Juniors	174	11	15	Juniors	201
Sophomores	218	32	11	Sophomores	196
Freshmen	227	42	New Class.	Freshmen	245
	819				813

Of the whole number of students set down as having left their classes, thirty-two either left College or were removed to some lower class in consequence of an unprofitable use of their time, seventeen withdrew by reason of ill-health, and four have been advanced to higher classes, under exceptional circumstances.

Three deaths have occurred, — one from pulmonary disease of long standing, one by drowning in the vacation, and one from an attack of acute disease, also in the vacation. In the general changes of plan which caused the withdrawal of most of the remainder of those whose names have disappeared from their former classes, pecuniary reverses had a considerable, but not, so far as can be ascertained, an unusual share.

The tables on pages 54 – 63, give the names of the instructors in charge of the various courses of study, the number of students in attendance upon each at the close of April, the number of sections in each course, and the number of hours of attendance both for student and instructor.

Instruction in Elocution was also given during the year by Messrs. Riddle and Ticknor to such students as chose to avail themselves of the opportunity. One hundred and seventeen Seniors and Juniors had weekly appointments with the instructors for this purpose, and one hundred and ten Sophomores and Freshmen attended in sections.

The difficulty of adjusting the hours and places of instruction and examination so as to meet all possible combinations of studies, referred to in my last Report, reached its height during the last year. With the expansion of the elective system, it was found that the semi-annual periods of examination were lengthening, with a serious diminution of the time for instruction, and that no definite limit could be set to this process, so long as the practice of the Faculty contemplated an entirely unrestricted choice of studies, with the necessary provision against bringing more than one examination on one day for any given student. A change was made, therefore, by throwing all the studies of the three upper classes into thirteen groups, assigning a different day of examination for every group, and requiring students in selecting their studies to choose but one from each group. This scheme fixes a definite limit beyond which the periods of examination need not expand, since any new elective study can be thrown into one of the existing groups; and it also greatly simplifies the arrangement of hours for the daily exercises, the only drawback to these advantages being such restriction upon a perfectly free choice of studies as is imposed by the necessity of avoiding any combination of studies in the same group. This restriction is of little practical consequence, however, the groups having been

PRESCRIBED STUDIES.

Instructors.	Subjects.	Text-Books.	No. of Students.	No. of Sections.	Exercises per week for Students.	Exercises per week for Instructors.
		FRESHMEN.				
Prof. J. W. White and Messrs. Dyer and L. B. R. Briggs	Greek	[*Maximum Sections.*]—Lysias (Five Orations).—Plato (Apology and Crito).—Homer (Odyssey, Book I.-XII.).—Goodwin's Greek Moods and Tenses.—Sidgwick's Greek Prose Composition.—Translation at Sight.—Lectures on Greek Literature	114	6	3	18
		[*Advanced Sections.*]—The above, and also Euripides (Medea)	70	2	3	6
		[*Minimum Section.*]—Selections from Herodotus.—Homer (Odyssey, Books I.-VIII.).—Goodwin's Greek Moods and Tenses.—Greek Prose Composition.—Translation at Sight.—Lectures on Greek Literature.	7	1	3	3
Prof. Smith and Messrs. Hale and Gould	Latin	[*Maximum Sections.*]—Livy (Books XXI. and XXII.).—Cicero (Walford's Extracts, Part I., in connection with Composition).—Horace (Odes and Epodes).—Lectures on Latin Literature.—Extemporaneous Translation and Composition	115	6	3	18
		[*Advanced Sections.*]—The above, and also Cicero (De Amicitia)	74	2	3	6
		[*Minimum Section.*]—Livy (Selections from Books XXI. and XXII.).—Homer (Odes and Epodes).—Lectures on Latin Literature.—Extemporaneous Translation	4	1	3	3
Messrs. Sheldon and Lutz	German	Whitney's Grammar.—Evans's German Reader and Whitney's German Reader.—Selections.—Composition	181	8	3	24
Prof. Jacquinot	French	Brachet's Petite Grammaire Française.—Selections from Fénélon, Voltaire, Achard, De Maistre, Scribe et Legouve	17	1	3	3
Profs. J. M. Peirce, C. J. White, and Byerly, and Mr. G. R. Briggs.	Mathematics	Solid Geometry (Chauvenet).—Plane Trigonometry (Wheeler).—Analytic Geometry (Lectures).—Algebra (Todhunter)	192	8	7 in two weeks.	28
		[*Advanced Section.*]—Analytic Geometry (Salmon's Conic Sections).—Algebra (Todhunter)	16	1		7 in two weeks.
Mr. Willson and Mr. N. D. C. Hodges	Physics	Deschanel's Natural Philosophy (Selections)	197	6 and 2	2	8
		[*Advanced Section*, for those entering with the maximum in Physics.]—Stewart's Conservation of Energy.—Maxwell's Theory of Heat	10	1	2	2
Prof. Cooke	Chemistry	Elementary Chemistry (Twenty-four Lectures)	204	1	1 from Nov. 1.	1 from Nov. 1.

		SOPHOMORES.				
Mr. Ware	Rhetoric	Hill's Principles of Rhetoric. — Abbott's How to Write Clearly	210 Soph. 2 Fresh.	4	2	8
Mr. Macvane	History	Freeman's Outlines of General History (to page 272) Flander's Exposition of the Constitution of the United States. — Ewald's The Crown and its Advisers	210 Soph. 2 Fresh.	4	2	8
Mr. Perry	Themes	Six Themes, corrected and rewritten	204 Soph.			
		JUNIORS.				
Profs. Peabody and Palmer	Philosophy	Jevons's Logic	138 Jun. 33 Soph. 1 Unm.	4	2 (for half-year)	8 (for half-year)
		Ferrier's Lectures on the Greek Philosophy	142 Jun. 29 Soph.	4	2 (for half-year)	8 (for half-year)
Prof. A. S. Hill and Mr. Ware	Themes	Six Themes, corrected and rewritten	162 Jun.			
Prof. Palmer	Forensics	Four Forensics Theses substituted for Forensics, as allowed by the rules, by	158 Sen. 6 Jun.			
		SENIORS.				
Prof. Peabody	Forensics	Four Forensics Written work substituted for one or more Forensics, as allowed by the rules, by	164 Sen. 32 Sen.			

ELECTIVE STUDIES.

Instructors.	Courses.	Subjects and Text-Books.	No. of Students.	No. of Sections.	Exercises per week for Students.	Exercises per week for Instructors.
Prof. Young	Hebrew	Hahn's or Theile's Biblia Hebraica. — Conant's Gesenius's Grammar	2 Sen. 1 Soph.	1	3	3
Prof. Greenough	Sanskrit	Elements of Sanskrit Grammar. — Hitopadeça (Book I.)	1 Sen. 2 Jun. 1 Soph. 2 Grad.	1	3	3
Prof. Greenough	Classics	Greek and Latin Comparative Philology (Curtius's Etymology. — Papillon's Greek and Latin Inflexions)	1 Sen. 4 Jun. 2 Soph. 2 Grad. 1 Unm.	1	2	2

ELECTIVE STUDIES — CONTINUED.

Prof. J.W. White	Greek 1	Æschylus (Prometheus). — Sophocles (Œdipus Tyrannus). — Demosthenes (Philippics)	2 Sen. 70 Soph. 10 Fresh. 1 Unm.	2	2	4
Prof. J.W. White	Greek 2	Thucydides (Sicilian Expedition). — Aristophanes (Birds). — Homer (Iliad XVIII.). — Lectures on Greek Etymology	6 Sen. 4 Jun. 25 Soph. 1 Fresh. 3 Grad.	1	2	2
Prof. J.W. White	Greek 3	Plato (Phædo). — Sophocles (Antigone). — Lectures on Greek Philosophy [Omitted in 1878–79.]			2	
Prof. J.W. White	Greek 4	Greek Composition (especially for candidates for Second-Year Honors). Sidgwick's Greek Prose Composition, Parts I. and II. — Written Translations	2 Sen. 6 Jun. 39 Soph. 7 Fresh. 2 Grad.	2	1	2
Prof. Goodwin	Greek 5	Advanced Greek Composition (especially for candidates for Final Honors). Sidgwick's Greek Prose Composition, Parts III. and IV. — Written Translations	3 Sen. 4 Jun. 2 Grad.	1	1	1
Prof. Sophocles	Greek 6	Arrian (Anabasis). — Polybius (Selections)	4 Sen. 5 Jun. 1 Soph. 1 Grad.	1	2	2
Prof. Goodwin	Greek 7	Demosthenes on the Crown, with parts of Æschines against Ctesiphon. — Thucydides (parts of Books I., II., and III.). — Athenian History (Times of Pericles and Demosthenes)	4 Sen. 25 Jun. 4 Soph. 1 Grad. 2 Unm.	1	3	3
Prof. Goodwin	Greek 8	Plato (Protagoras and parts of the Republic). — Aristotle (Ethics I.–III. and X.)	7 Sen. 2 Jun. 3 Grad. 1 Unm.	1	3	3
Prof. Goodwin	Greek 9	Æschylus (Agamemnon). — Sophocles (Electra). — Aristophanes (Frogs). — Pindar (Selections)	10 Sen. 3 Jun. 4 Grad. 1 Unm.	1	2	2
Prof. Smith	Latin 1	Cicero (Epistles). — Terence (Adelphi). — Horace (Satires)	1 Sen. 2 Jun. 42 Soph. 7 Fresh.	2	2	4
Prof. Greenough	Latin 2	Cicero (Pro Sestio). — Terence (Andria). — Horace (Satires). — Translation at Sight	5 Jun. 86 Soph. 1 Unm.	3	2	6

Prof. Smith	Latin 3	Quintilian (Book X.). — Tacitus (Agricola). — Juvenal	6 Jun. 13 Soph. 1 Grad.	1	2	2
Prof. Smith	Latin 4	Latin Composition (First Course)	2 Sen. 2 Jun. 36 Soph. 10 Fresh. 1 Unm.	2	1	2
Prof. Greenough	Latin 5	Cicero (De Natura Deorum; De Finibus). — Lucretius	4 Sen. 11 Jun. 1 Fresh. 2 Grad.	1	3	3
Prof. Lane	Latin 6	Tacitus (Annals). — Pliny (Epistles)	18 Sen. 51 Jun. 1 Soph. 2 Grad.	2	3	6
Prof. Smith	Latin 7	Latin Composition (Second Course)	1 Sen. 8 Jun. 1 Soph. 2 Grad. 1 Unm.	1	1	1
Prof. Lane	Latin 8	Plautus. — Lucretius	22 Sen 5 Jun. 3 Grad. 1 Unm.	1	3	3
Prof. Lane	Latin 9	Latin Composition (Third Course)	5 Sen. 2 Grad.	1	1	1
Prof. Child	English 1	English Literature. — Chaucer. — Bacon. — Milton. — Dryden	8 Sen. 4 Jun. 5 Soph. 1 Fresh.	1	3	3
Prof. Child	English 2	English Literature. — Shakspere	12 Sen. 6 Jun. 8 Soph. 2 Unm.	1	3	3
Prof. Child	English 3	English. — Sweet's Anglo-Saxon Reader. — Selections in Early English Literature. — Lectures	1 Sen. 1 Jun. 1 Grad. 1 Unm.	1	2	2
Prof. Child	English 4	Anglo-Saxon and Early English. — Beówulf (ed. M. Heyne). — Mätzner's Altenglische Sprachproben	1 Sen. 1 Jun. 1 Grad. 1 Unm.	1	2	2
Prof. A. S. Hill	English 5	Rhetoric and Themes (Advanced Course)	13 Sen. 11 Jun.	1	3	3

ELECTIVE STUDIES — CONTINUED.

Prof. A. S. Hill	English 6	Oral Discussion	16 Sen.	1	1 in two weeks.	3 hours in two weeks.
Mr. Cook	German 1	German Plays, Stories, and Essays. — Hauff's Märchen. — Hillebrand's Frankreich und die Franzosen. — Advanced Grammar	2 Sen. 6 Jun. 71 Soph. 5 Fresh. 1 Unm.	3	2	6
Prof. Bartlett	German 2	German Historical Prose (First Course)	1 Sen. 3 Jun. 68 Soph. 1 Div. St.	2	3	6
Mr. H. B. Hodges	German 3	German Scientific Prose	4 Sen. 3 Jun. 16 Soph. 1 Grad. 1 Unm.	1	2	2
Prof. Bartlett	German 4	German Composition and Oral Exercises. — Joyne's Otto's Grammar	1 Sen. 1 Jun. 19 Soph. 3 Fresh.	1	1	1
Prof. Bartlett	German 5	German Historical Prose (Second Course)	2 Sen. 29 Jun. 3 Soph. 1 Law St. 1 Div. St.	1	3	3
Mr. Cook	German 6	Schiller's Wilhelm Tell and Emilia Galeotti. — Peter Schlemihl. — Kinkel's Musikalische Orthodoxie. — Composition	15 Sen. 24 Jun. 1 Soph. 2 Fresh.	1	3	3
Prof. Bartlett	German 7	German Literature since 1750. — Examination of the chief writers of the Classic Period and of later authors (in Prose and Poetry) to Heine, Gutzkow, and Freytag	3 Sen. 3 Jun. 1 Soph. 1 Fresh.	1	3	3
Prof. Hedge	German 8	Richter. — Goethe (Faust and Aus meinem Leben). — German Lyrics. — Composition	18 Sen. 5 Jun. 1 Grad.	1	3	3
Prof. Jacquinot	French 1	Sevrette (Recueil de Morceaux Choisis). — Sandeau (Sacs et Parchemins). — About (Les Mariages de Paris)	1 Sen. 7 Jun. 52 Soph. 2 Fresh. 3 Unm.	2	3	6

Prof. Böcher	French 2	Molière (five comedies). — La Fontaine (Fables). — Racine (Andromaque). — Balzac (Eugenie Grandet). — Composition	9 Sen. 13 Jun. 51 Soph. 5 Fresh. 1 Sci. St.	2	3	6
Prof. Böcher	French 3	Demogeot (Histoire de la Littérature Française). — Molière (four comedies). — Corneille (Le Cid). — Montaigne (Selections). — Pascal (Selections). — Composition. — Lectures.	4 Sen. 13 Jun. 8 Soph. 1 Grad.	1	3	3
Prof. Jacquinot	French 4	Paul Albert (Littérature Française au XVIIIème Siècle). — Le Sage, Montesquieu, Voltaire, J. J. Rousseau, Beaumarchais. — Composition and Themes.	9 Sen. 1 Jun. 1 Soph. 1 Grad.	1	3	3
Prof. Böcher	French 5	Chanson de Roland. — Bartsch (Chrestomathie de l'ancien français). — Lectures [Omitted in 1878–79.]			3	
Mr. Bendelari	French 6	Historical French Prose. — Voltaire's Louis XIV. — Martin's Histoire de la France, t. xv.	4 Sen. 5 Jun. 4 Soph. 2 Fresh.	1	2	2
Mr. Bendelari	Italian 1	G. Gozzi (L'Osservatore). — Silvio Pellico (Le Mie Prigioni). — Toscani's Grammar. — Prose Composition	20 Sen. 19 Jun. 14 Soph. 1 Fresh.	1	3	3
Prof. Nash	Italian 2	A. Manzoni (I Promessi Sposi). — Modern Plays. — Torquato Tasso. — Syntax and Prose Composition	5 Sen. 9 Jun. 1 Unm.	1	3	3
Prof. Nash	Italian 3	Ariosto; Boccaccio; Petrarca; Dante (Selections from each). — Nannucci's Manuale della Letteratura del Primo Secolo. — Composition	10 Sen. 1 Grad.	1	3	3
Mr. Bendelari	Spanish 1	Prose Selections. — Gil Blas. — Josse's Grammar. — Prose Composition	16 Sen. 12 Jun. 16 Soph. 1 Fresh. 1 Grad.	1	3	3
Prof. Nash	Spanish 2	Modern Plays (Moratin; Hartzenbusch, &c.). — Lope de Vega. — Syntax and Prose Composition	4 Sen. 6 Jun. 3 Soph. 1 Grad.	1	3	3
Prof. Nash	Spanish 3	Early Spanish Literature: Selections from Cervantes, Calderon, and the Poem of the Cid. — Composition [Omitted in 1878–79.]			3	
Prof. Palmer	Philosophy 1	Cartesianism. — Descartes. — Malebranche. — Berkeley. — Hume	7 Sen. 19 Jun. 3 Soph. 1 Unm. 3 Div. St.	1	3	3
Prof. Bowen	Philosophy 2	Bouillier, Histoire de la Philosophie Cartésienne. — Kant's Critique of Pure Reason. — Schwegler's History of Modern Philosophy. — Lectures on French and German Philosophy	48 Sen. 6 Jun. 2 Unm.	1 and 2	3	4

ELECTIVE STUDIES — CONTINUED.

Prof. Bowen	Philosophy 3	German Philosophy of the Present Day. — Schopenhauer's Die Welt als Wille und Vorstellung. — Hartmann's Philosophie des Unbewussten	14 Sen. 1 Div. St.	1	3	3
Prof. James	Philosophy 4	Psychology. — Spencer's Psychology. — Lectures	15 Sen. 1 Soph. 1 Unm. 1 Div. St.	1	3	3
Prof. Peabody	Philosophy 5	Ethics. — Peabody's Moral Philosophy. — Janet's La Morale. — Lectures	54 Sen. 24 Jun. 15 Soph. 1 Fresh. 1 Unm.	1	3	3
Prof. Dunbar and Dr. Laughlin	Philosophy 6	Political Economy. — J. S. Mill's Political Economy. — Financial Legislation of the United States. — Lectures	45 Sen. 71 Jun. 1 Soph. 1 Grad. 3 Unm. 1 Law St.	2	3	6
Prof. Dunbar	Philosophy 7	Advanced Political Economy. — Cairnes's Leading Principles of Political Economy. — McKean's Condensation of Carey's Social Science. — Lectures	31 Sen. 3 Jun. 2 Grad.	1	3	3
Dr. Emerton	History 1	Later Roman and Early Mediæval History [Omitted in 1878-79.]			2	
Dr. Emerton	History 2	The General History of Europe from the beginning of the Ninth to the end of the Thirteenth Century	1 Jun. 6 Soph.	1	3	3
Dr. Emerton	History 3	The Revival of Learning and the Reformation (1300-1550)	8 Sen. 13 Jun. 2 Soph. 1 Grad.	1	3	3
Mr. Macvane	History 4	History of England to the Seventeenth Century	13 Sen. 19 Jun. 7 Soph. 1 Unm. 2 Law St.	1	3	3
Dr. Lodge	History 5	Colonial History of America to the year 1789	2 Sen. 1 Jun.	1	3	3
Dr. Lodge	History 6	History of the United States from 1789 to 1840	7 Sen. 3 Jun. 1 Fresh.	1	3	3
Prof. Torrey	History 7	European History during the Seventeenth Century and first half of the Eighteenth	38 Sen. 38 Jun. 1 Law St.	2	3	6
Prof. Torrey	History 8	European History from the Middle of the Eighteenth Century. [Omitted in 1878-79.]			3	

Prof. C. J. White	Mathematics 1	Practical Applications of Trigonometry. — Principles of Surveying. — Spherical Trigonometry. — Applications of Spherical Trigonometry to Astronomy and Navigation.	1 Sen. 1 Jun. 15 Soph. 1 Fresh. 1 Unm. 1 Sci. St.	1	2	2
Prof. Byerly	Mathematics 2	Differential and Integral Calculus; Elementary Course	4 Sen. 1 Jun. 38 Soph. 2 Fresh. 1 Unm. 1 Sci. St.	1	2 or 3	3
Prof. J. M. Peirce	Mathematics 3	Theory of Equations, including Determinants [Omitted in 1878–79.]			2	
Prof. J. M. Peirce	Mathematics 4	Analytic Geometry. For students who have a thorough knowledge of the Analytic Geometry of the Right Line (Salmon's Conic Sections, I., II., III., and V.) and an elementary knowledge of the Conic Sections	1 Sen. 13 Soph. 1 Unm. 1 Sci. St.	1	2 or 3	3
Prof. Byerly	Mathematics 5	Differential and Integral Calculus; Second Course	1 Sen. 14 Jun.	1	3	3
Prof. J. M. Peirce	Mathematics 6	Quaternions (First Course)	1 Sen. 4 Jun.	1	3	3
Prof. Eustis	Mathematics 7	Descriptive Geometry and Perspective	1 Sen. 1 Jun. 5 Sci. St.	1	3	3
Prof. J. M. Peirce	Mathematics 8	Analytic Mechanics	1 Sen.	1	3	3
Prof. Lovering	Physics 1	Astronomy, Optics, and Acoustics. — Herschel's Astronomy. — Deschanel's Light and Sound. — Tyndall's Heat as a Mode of Motion	1 Sen. 9 Jun. 15 Soph. 1 Unm.	1	2 or 3	3
Prof. Trowbridge	Physics 2	Practical Exercises in the Laboratory, including the use of instruments of precision in testing the Laws of Mechanics, Acoustics, Optics, Magnetism, and Electricity; and an extended course in Electrical Measurements. — Kohlrausch's Measurements	2 Sen. 8 Jun. 4 Soph. 3 Sci. St.	1	3	3
Prof. Trowbridge	Physics 3	Mathematical Physics (Thomson and Tait's Elements of Natural Philosophy, Part I.)	2 Unm.	1	2	3
Prof. Lovering	Physics 4	Undulatory Theory of Light. — Electricity and Magnetism [Omitted in 1878–79.]			3	
Prof. Gibbs	Physics 5	The Spectroscope and its Applications. — Thermodynamics and Thermics, including the Applications of Heat	2 Sen. 1 Unm.	1	3	3
Prof. Jackson	Chemistry 1	Descriptive Chemistry (with Laboratory Work)	4 Sen. 6 Jun. 81 Soph. 2 Fresh. 3 Unm. 3 Sci. St.	4	2 or 3	9
Prof. Cooke and Mr. Melville	Chemistry 2	Determinative Mineralogy and Lithology (with study in the Mineral Cabinet)	9 Sen. 9 Jun. 16 Soph. 1 Grad. 2 Unm.	1	3	3

ELECTIVE STUDIES — CONTINUED.

Prof. H. B. Hill	Chemistry 3	Qualitative Analysis and Chemical Philosophy (with Laboratory Work)	7 Sen. 14 Jun. 2 Soph. 2 Unm. 3 Sci. St.	1	3	3
Prof. Cooke and Mr. H. B. Hodges	Chemistry 4	Quantitative Analysis (in the Laboratory)	2 Sen. 2 Jun. 1 Unm.	1	3	3
Prof. H. B. Hill	Chemistry 5	The Carbon Compounds. — Lectures and Laboratory Work	2 Sen. 1 Unm.	1	3	3
Prof. Cooke	Chemistry 6	Advanced Course in Experimental Chemistry (in the Laboratory) [Omitted in 1878-79.]			3	
Prof. Cooke	Chemistry 7	Crystallography and the Physics of Crystals (with work in the Mineral Cabinet) [Omitted in 1878-79.]			3	
Mr. Davis	Natural Hist. 1	Physical Geography, Meteorology, and Structural Geology. — Dana's Text-book of Geology. — Buchan's Text-book of Meteorology	6 Sen. 12 Jun. 13 Soph. 1 Fresh. 1 Bussey 1 Sci. St.	1	2	2
Prof. James	Natural Hist. 2	Comparative Anatomy and Physiology of Vertebrates	52 Sen. 34 Jun. 3 Soph. 1 Unm. 3 Sci. St. 1 Bussey	1	3	3
Dr. Mark	Natural Hist. 3	Zoölogy (Elementary Course)	5 Sen. 3 Jun. 3 Soph. 1 Grad. 1 Unm. 1 Sci. St. 1 Bussey	1	3	3
Prof. Shaler	Natural Hist. 4	Geology	44 Sen. 20 Jun. 13 Soph. 1 Grad. 1 Unm. 3 Sci. St.	1	3	3
Mr. Faxon	Natural Hist. 5	Zoölogy (Advanced Course) [Omitted in 1878-79.]			3	

Prof. Goodale	Natural Hist. 6	Elementary Botany. — Gray's Structural and Systematic Botany	31 Sen. 30 Jun. 29 Soph. 3 Fresh. 1 Grad. 2 Unm. 1 Div. St.	1	2 of 1½.	3
Prof. Goodale and Prof. Farlow	Natural Hist. 7	Advanced Botany.—Lectures and Laboratory Practice	5 Sen. 2 Jun. 1 Grad. 1 Unm. 1 Sci. St. 1 Bussey	1	2 of 1½.	3
Prof. Paine	Music 1	Harmony	1 Sen. 2 Jun. 6 Soph. 4 Fresh. 1 Sci. St.	1	2	2
Prof. Paine	Music 2	Counterpoint	5 Sen. 3 Jun.	1	3	3
Prof. Paine	Music 3	History of Music	9 Sen. 6 Jun. 2 Soph.	1	3	3
Prof. Paine	Music 4	The Instrumental Music of Haydn, Mozart, Beethoven, and their successors	3 Sen. 4 Jun. 6 Soph. 1 Fresh. 1 Sci. St.	1	1	1
Mr. Moore	Fine Arts 1	Principles of Design in Painting, Sculpture, and Architecture	18 Sen. 7 Jun. 8 Soph. 1 Fresh.	1	3	3
Prof. Norton	Fine Arts 2	History of the Fine Arts of Construction and Design, and their Relations to Literature. — Oriental, Egyptian, Greek, Roman and Mediæval Art, and the Italian Renaissance	74 Sen. 52 Jun. 18 Soph. 1 Fresh. 4 Unm. 1 Law St.	1	3	3
Prof. Norton	Fine Arts 3	The Renaissance	27 Sen. 10 Jun. 1 Soph. 2 Unm.	1	3	3

formed so far as possible of studies not usually taken together by any great number of students, and the comparatively fixed character of the present arrangement also making it probable that the student can, by a judicious choice of studies in different years, so arrange his work as to secure any course of study which he thinks desirable.

The names of the students who received academic honors, or to whom honors or prizes of any kind were awarded during the year, are given in a statement which accompanies this Report (see Appendix VIII., IX.).

Under the rules of the Faculty, any student who does not secure forty per cent of the maximum mark on the average of all his studies for the year, is required to join a lower class, as the necessary condition of his remaining in College. At the close of the last year, this rule was enforced in the case of one Junior, one Sophomore, and of twelve Freshmen. To these fourteen should be added one Junior, two Sophomores, and eight Freshmen, who were required to leave College at an earlier period, in consequence of the hopeless condition of their work. The following table will show the number of students thus removed or withdrawing from their classes by reason of failure in scholarship, for the last six years: —

	1874.	1875.	1876.	1877.	1878.	1879.
Removed to lower classes . . .	13	19	28	17	25	14
Withdrawn during the year . . .	10	13	8	16	4	11
Total	23	32	36	33	29	25
Whole number of students .	706	716	776	823	813	819

For less serious deficiencies, one hundred and eighty-nine students were notified that they must repeat the work in one or more studies, or perform its equivalent, and must pass satisfactory examinations thereon, as the condition of being finally recommended for a degree.

Five Seniors failed to receive the Bachelor's degree at the end of the year. Of these, one was obliged by illness to withdraw from a part of his final examinations; three were deficient in parts of the work of the Senior year, and also of some previous year; and one was deficient in a part of the work of a previous year. For the past five years the number of Seniors failing to obtain their degree by reason of failure in scholarship has been as follows: —

	1875.	1876.	1877.	1878.	1879.
Passed in all their work	183	135	170	144	189
Failed, but can make up	11	6	17	11	5
Failed, and must repeat the year .	2	3	2	4	..

Of the five Seniors who lost their degrees in 1879, it must be added, one was dismissed for dishonesty at an examination, so that, although his deficiency in scholarship was one which could have been made up, his dismissal prevents him from thus qualifying himself for the degree. Eleven other students were suspended in the course of the year: seven for periods ranging from two and a half to four months, for absence and serious neglect of prescribed duty; two for periods of three and four months respectively, for offences against good order; and two for the whole year, for grave violation of the truth. Although two or three of the cases of discipline here recorded were, as will be seen, of peculiarly painful character, the general order of the College for the year has been good. It is not doubted that, with the freedom from restraint necessarily allowed under the conditions of University life to so large a body of young men, occasional offences against good manners and morals pass unnoticed by the authorities. The judgment of many careful observers, however, warrants the belief that the standard of morals and of honor, maintained by the students as a whole, continues to justify the wisdom of the policy of relying upon the refining influences of liberal study and good companionship, rather than upon strictness of regulation.

The whole number of applicants for admission to the Freshman class in 1879 was two hundred and eighty-four, of whom one hundred and seventy-nine presented themselves for examination upon the requisitions of Method I. (the new method), with the following results: —

METHOD I.

1878. 133 Candidates. 1879. 179 Candidates.	MINIMUM REQUISITIONS.										
	Cæsar and Virgil.	Latin at Sight and Comp.	Xenophon or Reader.	Greek Sentences.	Ancient History, and Geography.	Arithmetic.	Algebra.	Plane Geometry.	Minimum Physics.	English Composition.	French or German.
Percentage failing in each study.											
1878	14	7.5	29	18	20	13	31.5	43	14	19	36
1879	8	11	20	23	18	14.5	28.5	37	19	28.5	21

	MAXIMUM REQUISITIONS.								
	Cicero and Virgil.	Latin at Sight and Comp.	Herodotus.	Greek Comp.	Iliad.	Trigonometry.	Solid Geometry.	Maximum Physics.	Chem. or Botany.
Percentage failing in each study.									
1878	7	15	17.5	36	21	29	65	38	57
1879	16	28	22	33	13	32.5	60	48	24

Of the remaining one hundred and five applicants who presented themselves upon the old method, one hundred applied for admission upon Course I. and five upon Course II. The admissions and rejections of candidates upon the several methods and courses were as follows:—

	Method I.	Method II.	
		Course I.	Course II.
Candidates offered	179	100	5
„ admitted	153	88	2
„ „ without conditions	51	22	. .
„ rejected	26	12	3

The success of the candidates applying under the two methods respectively, compared with the results in former years, and excluding the small number of cases under Course II., was as follows: —

	Percentage admitted without conditions.	Percentage rejected.
Method I., 1878 . . .	34	18
1879 . . .	28	15
Method II., 1876 . . .	24	15
1877 . . .	29	17
1878 . . .	19	14
1879 . . .	22	12

The adoption of Method I. by the best preparatory schools has been so easily effected, and the proportion of applicants prepared upon this method is now so great, that the Faculty have determined to make it the only method of examination after 1880, and have accordingly given notice to that effect. This early displacement of the old method was hoped for, but was not confidently expected, when the change was first proposed. It has been effected without serious difficulty, has simplified the work of the preparatory schools, and also made it more effective, and is believed to have raised the standard of real attainments during that period of prescribed study which ends with the Freshman year, without, however, adding to the time required. In order to show the working of the new method as regards the selection of maximum subjects by the candidates, I subjoin a table showing the various combinations offered in the last two years, premising that it should be borne in mind that a large proportion of the cases in 1878, and a considerable number in 1879, were those of candidates who had begun their preparation on the old method and had then changed to the new: —

Candidates under Method I.	1878.	1879.
[Required to offer the maximum in at least *two* subjects.]		
Offered Maximum in		
Latin, Greek, Mathematics, and Physics	2	3
Latin, Greek, and Mathematics	4	3
Latin, Greek, and Physics	2	3
Latin, Mathematics, and Physics	2	..
Greek, Mathematics, and Physics	..	1
Latin and Greek	104	109
Latin and Mathematics	8	14
Latin and Physics	9	23
Greek and Mathematics	1	2
Greek and Physics	1	1
Mathematics and Physics	5	15
Total number of candidates	138	179

The examination of candidates in the translation at sight of easy French or German prose had the following results in 1879: —

Candidates examined in French or German		266
" "	French	236
" "	" and failing	52
" "	German	38
" "	" and failing	4
" "	both languages	8

As a consequence of the discontinuance of the old method of examination after 1880, it has been announced that no preliminary examination upon that method will be held hereafter. The numbers of candidates presented at the preliminary examinations upon the two methods respectively in 1878 and 1879, and their success in securing credit for their work, are shown by the following statements: —

Preliminary Examination.	Candidates.	In Five Subjects.	In Six Subjects.	In Seven Subjects.	In Eight Subjects.	In Nine Subjects.	In Ten Subjects.	In Eleven Subjects.	In Twelve Subjects.	In Thirteen Subjects.	Failed to pass in Five Subjects.
Method I.											
1878	133	16	20	12	15	18	6	..	..	..	46
1879	215	38	29	23	29	13	10	3	..	..	70
Method II.											
1878	108	20	20	6	8	6	6	3	1	2	36
1879	30	5	4	1	2	6	3	1	1	..	7

The results of examination in 1879 in the several subjects under Method I. are as follows: —

Preliminary Examinat'n. METHOD I. 1878. 133 Candidates. 1879, 215 "	Cæsar and Virgil.	Latin at Sight.	Xenophon or Greek Reader.	Greek Sentences.	Ancient History and Geography.	Arithmetic.	Algebra.	Geometry.	Physics.	English.	French.	German.
Percentage of the whole number of candidates who were examined in each study.												
1878	95	86	69	71	78	90	71	29	71	82	60	6
1879	89	86	74	80	77	96	93	55	55	69	56	7
Percentage of failure among those examined in each study.												
1878	33	28	30	47	40	14	38	72	20	34	26	50
1879	24	25	33	44	23	26	52	78	15	53	13	14

Of the Freshmen admitted in 1878, fourteen passed examination upon the Latin of the Freshman year at admission, eleven upon the Greek, four upon the whole or a part of the Mathematics, and thirteen upon the German. Elective courses were taken in place of the studies thus anticipated, the majority availing themselves of their exceptional preparation by taking advanced courses in the same studies.

An important change in the course of study was effected in the past year, by the removal of Logic and Metaphysics from the prescribed work of the Junior year, and of History from that of the Sophomore year. The discontinuance of Logic and Metaphysics had been discussed in previous years, but the Faculty had preferred to move with caution in a matter closely connected with the future success of so flourishing a department as that of Philosophy. Upon full consideration the opinion became settled, that for a considerable part of every class the gain from the prescribed study was too small to weigh against the advantage of an increase of elective work, and the Faculty were satisfied that the study of Philosophy has too vigorous and independent a life, and too strong a hold in the present traditions of the College, to need the support of an introductory course, prescribed for all. Indeed, no subject more quickly excites the curiosity of the best class of students, when they begin to look beyond the round of classical and mathematical studies, and none has proved itself more surely able to secure its full share of the best intellectual material in every class. This result is in great measure due to the self-sacrificing energy with which the present head of the department has long devoted himself to its interests, and it was from a firm conviction that he had achieved durable success that the Faculty resolved upon this important step. In dealing with the prescribed History it appeared equally clear, that the gain from the enforced study was no longer an equivalent for the loss of two hours of additional elective work, while there was no such tributary relation between the prescribed study and the advanced courses in History as to give the former an especial value. It had never been found practicable to consolidate the work of the two half-years in History, and it had consequently retained a certain fragmentary character, with great loss of usefulness. As a prescribed study it was necessarily made to include a general survey of the historical field, this general character being indeed the reason for its existence ; but such a survey, to be accomplished in a course covering two hours a week for a single year, was too meagre to be of value, and the Faculty accordingly resolved upon a different and more profitable use of the time.

These important changes no doubt present the possibility of graduation without acquaintance with the rudiments of Logic or Metaphysics, or any systematic study of History, except such as is required in pursuing the Classics. To some extent provision has been made against this evil by establishing attractive introductory elective courses both in Philosophy and History, as will be seen below ; but the possibility still remains. In this case, as in others in previous years, the Faculty have had to choose between offering the opportunity for thorough study of a limited number of selected topics, and enforcing upon all a superficial study of many topics. The risk of an incomplete outfit of easily acquired information in some directions appeared to them less serious than the loss of an opportunity for training which may never recur in the life of the student, and they therefore took this further step in pursuance of the policy which for several years past has governed their decision of this class of questions. The withdrawal of Logic and Metaphysics from the prescribed course left the Junior year free from all prescribed work other than written exercises, and induced the Faculty to increase the elective work in this year to fourteen hours of recitation per week. The withdrawal of History in like manner made room for raising the elective work of the Sophomore year to twelve hours of recitation per week, leaving Rhetoric and Themes as the only prescribed work of this year.

At the same time with the changes just described, the Faculty also made a more careful revision of the list of elective studies than has been made for several years. In Greek, a course in Xenophon and Herodotus for reading at sight, presenting interesting novelties of method, was established, to be given by Professor J. W. White. In Latin, Courses 3 and 5 in the list of studies given above were discontinued, and a course in Latin Poetical Literature, to be given by Professor Smith, was established. In English, a course in the Later English Literature was authorized to be given by Professor A. S. Hill. In Philosophy, introductory courses covering the ground formerly taken by the prescribed Logic and Metaphysics, were established under Professors Bowen and Palmer, and a course upon the Philosophy of Evolution, also for beginners, was opened, to be given by Professor James. The courses in Political Economy were removed from the department of Philosophy, and a new course, intended for that considerable class of students who wish for some knowledge of the elements of the subject and its practical application, without making a close study of economic theory, was established. In History, a rearrangement of courses was made, three introductory courses in Mediæval and Modern History and in Constitutional Government being opened, to take the place of the formerly prescribed study of the Sophomore year. A course in Later Roman History, to be conducted by Professor Gurney, was also established, and the courses in American History were consolidated into one on the Constitutional and Political History of the United States, to be given by Mr. Hoague. Provision was made for an alternation of topics in Professor Norton's courses in Fine Arts, and in Mathematics Professor Byerly offered a new course in Analytic Mechanics and the Theory of Light. And finally, the courses in Zoölogy and Botany were rearranged, so as to present in each subject, in addition to an elementary study, an advanced course, which is to be open hereafter only to those who have had the preparatory training of a laboratory course in Biology under Professor Farlow and Mr. Faxon. The effect of these changes was an apparently large increase in the number of elective courses; in fact, the importance of the changes is to be found in the addition of a few valuable courses, and in the more systematic arrangement of the ground in several much-frequented departments of study.

The Faculty also made a change of some importance, in the last year, in the rules under which distinctions are conferred at graduation for good scholarship. The system under which Commencement parts have been assigned hitherto has made them attainable only by students receiving a certain high percentage on what is known as the general scale, or the scale which is formed by ascertaining the aggregate of all the marks received by each student in all the studies of his college course. The only exception to this general rule was that made by a provision for assigning parts of the lowest grade to students, not entitled to receive them by their position on the general scale, who should have attained an exceptionally high percentage on the work of the Junior and Senior years. Only a small proportion of the parts were, however, actually assigned under this provision, and it remained true in general that the attainment of a Commencement part was evidence of long-continued and steady general excellence in study, any considerable interruption of his efforts or serious failure in any important branch of study greatly endangering the success of the ambitious student. While the Faculty recognized as fully as ever the high merit of such persevering and successful effort as was thus implied by a high rank on the general scale, they nevertheless felt that Commencement distinctions might better serve their purpose if they were placed within the reach of some classes of students who could never hope to attain the necessary position on the general scale. High attainments in a special line of study in their judgment constitute a claim for distinctions at graduation, not less valid than that which rests upon uniform excellence of college work, and it appeared probable that a liberal recognition of such special attainments might give a new stimulus to many students not reached by the high prizes of the old system. A step had been taken in this direction by the rule requiring the names of students receiving special honors at graduation in any department of study to be printed on the Commencement programme; but the requisitions for attaining these honors are severe, and hence they appeal to the ambition of but a limited class of students. The Faculty determined, therefore, without lowering the standard of the honors already established, to offer a new class of distinctions, likely to affect a considerable part of the class, and then to recast the rules for assigning Commencement parts.

With these objects in view, a rule was adopted by which any student who shall attain in any study a mark of eighty per cent on an amount of elective work, not elementary, equivalent to eight hours of recitation per week, shall receive Honorable Mention in that study on the Commencement programme. The distinction thus offered is not likely to satisfy those who feel that the higher rewards are within their reach, but it is believed that it may encourage effort among that large class who have a certain degree of aptitude for special lines of study, but are hopeless, or not ambitious, with respect to high academic rank.

The Faculty then prepared regulations for recommending candidates for the Bachelor's degree, either for an ordinary degree or for a degree with distinction; the grades of distinction being *summa cum laude*, *magna cum laude*, and *cum laude*. The degree *summa cum laude* is for those who have attained ninety per cent on the general scale, or have received Highest Honors in any department, and carries with it the assignment of an oration on the list of Commencement parts; the degree *magna cum laude* is for those who have attained eighty per cent on the general scale, or have received Honors in any department, and carries with it the assignment of a dissertation; and the degree *cum laude* is to be given to those who attain seventy-five per cent on the general scale, and to those who receive Honorable Mention in any study together with sixty-five per cent on the general scale, or seventy per cent on the last three years, or seventy-five per cent on the last two. Provision is made for those who enter College as Sophomores; and it is also provided that the reason for the distinction shall, in every case, be stated in the diploma. Upon the recommendation of the Faculty, section nine of the Statutes was amended so as to allow the establishment of four grades in the Bachelor's degree, and the new regulations were then published, and will take effect at the next Commencement.

Independently of the effects of these changes upon scholarship, they seem likely to strengthen the growing interest felt by the students in the Commencement exercises. The application of the rules hitherto governing the assignment of Commencement parts has usually given a list of not far from twenty-five persons entitled by rank to appear on the list. From the pieces written by these students, a committee has of late years selected five or six to be actually spoken on the Commencement platform. The selection of speakers has therefore been the result of a serious competition, and to this fact, together with the energetic efforts of the instructors in Rhetoric and Oratory, may be ascribed the considerable improvement which has been effected in the quality of the undergraduate exercises at Commencement. The new arrangements are likely to more than double the number of competitors from whom the half-dozen actual speakers are to be selected, and thus to strengthen the competition. As the general conditions of success in this trial are superior ability to discuss intelligently and in good English some subject-matter with which the student is acquainted, and to deliver his thoughts effectively in public, increased attention to practice in composition and elocution may be expected as one of the results of the additional emphasis now given to the honors of Commencement Day.

CHARLES F. DUNBAR, *Dean.*

To THE PRESIDENT OF HARVARD UNIVERSITY: —

SIR, — As Dean of the Theological Faculty, I respectfully submit the following Report upon the Divinity School for the academic year 1878–79: —

Twenty-three students were connected with the School during the year. They were distributed as follows: —

Senior Class	3
Middle ,,	8
Junior ,,	11
Special Student	1

Of this number, two left early in the year, on account of ill-health contracted before joining the School. One Senior left before graduation, also from ill-health. His place was supplied, however, by a student who had left the School two years before, without at that time wholly completing his examination. There were thus three graduates from the School. Three undergraduates took Hebrew as an elective; two of the number studying also the Exegesis of the New Testament with the Junior Class of the Divinity School.

The improvement in the quality and preliminary education of the students, which was referred to in my last Report, still continues. A few years ago, college graduates were the exceptions. The last year, there was but one student in each class who was not a college graduate; and these exceptions were for the most part men of good education, one having been two years in college, and another having received a legal training. A few years ago, it was common to have connected with the School a number of special students, who were such because they could not pass the examinations required for admission to the regular course. The last year, there was but one special student, and he was amply qualified to take his place as a regular student, had he wished. This improvement has been so regular during the last few years, that it cannot be merely the result of accident.

The accompanying tables, on pages 76, 77, represent the work of the School for the year.

The system by which students of the Divinity School are enabled to attend exercises in College is so important, that its working deserves special consideration. The labor required of students in their proper field is so great, that only a limited amount of time and strength can be given to these extra studies. How limited this is, the student does not realize at the start. He is thus naturally tempted to undertake more than he can perform. Thus it generally happens that some join a college class who in a few weeks are forced to abandon it. There were several such cases at the beginning of the last year. Five men, however, attended exercises in the College regularly during the year, and one other during the greater part of the year. Of these, two took German, one Botany for the second time, two Psychology, and one attended exercises in French, Latin, and Greek, studying the lessons but not taking part in recitations. As these men studied purely for the knowledge to be gained, and as the examinations in the College came at the time when their strength was taxed by preparation for the examinations required in the Divinity School, only one presented himself for the College examinations. I am informed by the College teachers with

Instructor.	Subjects and Methods of Study.	Number of Students.	No. of Exercises a Week.
	JUNIOR CLASS.		
Prof. Abbot.	Introduction to Textual Criticism of the New Testament; Exegesis of Gospel of Matthew, from the first to the tenth chapter inclusive, with parallel passages in Mark and Luke. Lectures, Recitations, and Dissertations by students.	10	2
Prof. Young.	The Hebrew Language. Hahn's or Theile's Biblia Hebraica, and Gesenius' Grammar. After finishing the Grammar, the class read portions of the Pentateuch and Psalms, and had frequent exercises in forming sentences in Hebrew on the black-board. They practised also reading at sight, and committed to memory passages from the Hebrew Scriptures.	15	8
Prof. Young.	Readings from the Hebrew Bible: attendance voluntary.	7	1
Prof. Everett.	Homiletics. Exercises by students, illustrating different methods of treating any theme. Lectures on the Composition of Sermons, on Rhetoric as applied to the Sermon, and on the Sermon considered in relation to the Purpose of Preaching (with Middle Class).	17	1
Prof. Everett.	Methods and Principles of Philosophy, with reference to theological study. Lectures, a few recitations in Everett's Science of Thought; references to authorities.	10	1
Mr. Allen.	Ecclesiastical History. First Period, to the end of the eighth century. ·Smith's Student's Ecclesiastical History, with discussions and constant reference to original sources.	9	2
Mr. Ticknor.	Elocution.	10	
	MIDDLE CLASS.		
Prof. Abbot.	New Testament. Gospel of Matthew, from chap. xviii. to chap. xxviii., inclusive; and the Epistle of the Romans, from chap. i. to chap. vii., inclusive.	9	2
Prof. Young.	Hebrew Poets and Prophets. Recitations in selected passages, with exposition by teacher, special attention being given to obscure and controverted passages.	5	2
Prof. Everett.	Homiletics. Introductory Exercises and Lectures (with the Junior Class, as above).		
Prof. Everett.	Homiletics. Sermons preached by students before the two upper classes, and criticised by students and teacher.	11	1

MIDDLE CLASS — CONTINUED.

Prof. Everett.	Comparative Theology. Vedic Religion, with analysis of Upanishads, Buddhism, Parsism, and the Chinese Religion (with Senior Class). Lectures, with references. — Liturgics and Pastoral Care. Fifteen Lectures, interrupting by so much the course on Comparative Theology.	11	2
Mr. Allen.	Ecclesiastical History. Second Period, from the ninth to the fifteenth century, inclusive. Chief Authorities: Milman's Latin Christianity and Greenwood's Cathedra Petri. The students were also referred to other sources. Lectures and discussions.	8	2
Mr. Ticknor.	Elocution. Each student twenty minutes a week.		

SENIOR CLASS.

Prof. Abbot.	New Testament. Gospel of Matthew, from chap. xxvi. to chap. xxviii.; Gospel of John, from chap. x. to chap. xxi.; Epistle to the Romans, from chap. i. to chap. vii., inclusive.	8	2
Prof. Young.	Lectures on the Old Testament, and on the Antiquities, Chronology, Calendar, and Customs of the Jews.	4	1
Prof. Everett.	Systematic Theology. Lectures and references.	5	1
Prof. Everett.	Homiletics. With the Middle Class, as above.		
Mr. Allen.	Ecclesiastical History. Third Period, from beginning of the sixteenth century to the present time. Lectures and discussions.	8	1
Mr. Allen.	Lectures on Salient Points of Church History (open to all students).	16	1
Mr. Ticknor.	Elocution. Each student twenty-five minutes a week.		

GENERAL EXERCISES.

Preaching by some student every Friday evening, open to the public; the sermon carefully prepared and submitted to the teacher of Homiletics.

Extempore speaking once in two weeks by three, later by two, students, on a subject approved by the Faculty; each speaker being criticised by all members of the Faculty in the presence of the School.

Conference meeting, conducted by students, the Faculty being present once in two weeks (alternating with the above).

Evening prayers, conducted by students.

whom they studied that their attendance was very regular, and that those who took part in recitations showed careful study. The College exercises thus suffered in no way by their attendance, while to themselves the gain was very great.

The School suffered during the last year the inconvenience of one vacant professorship, with no available means of procuring even a temporary substitute. This inconvenience, so far as the amount of work appointed for students was concerned, was less than might have been supposed. Indeed, it gave a favorable opportunity to make certain desirable changes in the order of studies in the course. It was thought best to move to the Middle year the study of the Ethnic Religions which had previously been taken up in the Senior year, that they might hold in the course of theological study a position similar to that which belongs to them in the development of Religion. The study of Homiletics, which had been begun in the Middle year, it was thought best to commence in the Junior year, in order that this important study might be extended over the entire three years of the course. These changes made it necessary to take in each case two classes together. On the other hand, it was thought best that the study of Systematic Theology, as being in one sense the outcome of all the other studies of the course, should be concentrated in the Senior year, instead of being extended over the three years. This change rendered much less instruction than usual necessary in this department. The Seniors, having pursued the study for two years, required but one hour a week during the year; while in the case of the other classes it could be omitted altogether. Mr. Allen, entering upon the department of Ecclesiastical History, delivered a valuable course of lectures to the whole School, extending over the year. The Senior class had studied Ethics for two years, and did not really require additional time for this purpose; and this study, in the case of the lower classes, could be deferred without serious loss. From all these causes, the students had very nearly the usual amount of class exercises, and no study was to any great degree neglected.

The matter of furnishing pecuniary aid to students, by scholarships or otherwise, has received the earnest consideration of the Faculty during the year. By such help, great good may often be accomplished; but by its inconsiderate use harm may sometimes be done, both to the individuals so helped and to the institution with which they are connected. The funds at the command of the School for this purpose are so ample that there is the temptation to distribute them too freely. Unquestionably this mistake has often been committed in the past, and to avoid a repetition of this error has been one of the objects at which the Faculty, during the past year, has especially aimed. The real difficulty presents itself in regard to students passing their first year in the School. As the instruction of that year is largely given by lectures, the students cannot show what attainment they are making until the examinations near the close of the year. They must be judged chiefly by the recommendations that they bring, and by their general appearance. After the first year there is no difficulty. At the close of the examinations, students who fell short of the percentage deemed necessary to win a scholarship were, this last year, notified that they could not expect to receive such help in the future. This policy will be more rigidly carried out hereafter, while special pains will be taken to meet the difficulty that was referred to, in regard to new-comers. Their past record will be scrutinized more closely, and in all cases the effort will be made that no unsuitable person shall receive help, and that the help given shall correspond accurately with the standing of the student in the School.

During the last year, 601 volumes and 921 pamphlets have been added to the Library, together with a large number of newspapers. These were chiefly donations. Among them may be mentioned 86 volumes and 5 pamphlets, from Miss Abby B. Francis; and 316 volumes, 737 pamphlets, and 1,434 newspapers, from the family of the late Rev. R. M. Hodges, in accordance with his expressed wish. Both these gifts of books and pamphlets were accompanied by valuable engraved portraits, those of Hugo Grotius, Isaac Barrow, Jonathan Mayhew, and others in the first case, and of James Freeman, John Kirkland, John Prince, and others in the second. From Mrs. Francis T. Washburn were received 81 volumes and 1 pamphlet. This last-named gift included among other valuable books several Dutch works representing the modern Dutch school in theology.

During the last year one of the rooms of the Library, in which the books were mostly those suited for reference, was set apart as a reference or reading room. Shelves were assigned to each teacher, on which could be placed works from other parts of the

Library, recommended to students in connection with the different courses of study. From this room no book can be taken, but the students have access to it at all hours of the day and evening. Thus at a merely nominal cost the usefulness of the Library has been vastly increased. The use of shelves in Gore Hall, set apart for books reserved for a similar purpose, is also granted to teachers of the Divinity School, as well as to those in other departments of the University. Among the gains resulting from these changes, in addition to the direct results to students, should be named the improved methods of teaching that cannot fail to follow.

In March last, an appeal was made for an increased endowment of the Divinity School. To assure the maintenance of five professorships and one instructorship, $130,000 were asked for. The appeal met a response at once unexpected and encouraging; $90,000 were raised before the close of the academic year. The subscription has since been further increased, and the whole amount will undoubtedly be received.

C. C. EVERETT, *Dean*.

DECEMBER, 1879.

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — I beg to submit the following report upon the Law School for the academic year 1878–79: —

The table on page 81 gives the courses of study and instruction during the year, the names of the instructors, the text-books used, the number of exercises per week in each course, and the number of students who offered themselves for examination in each course at the end of the year.

There were fifteen moot-courts held during the year, — three by each of the professors.

The whole number of students connected with the School during the year was one hundred and sixty-nine. Of these, one hundred and thirty seven were in the School during the whole of the year, nineteen during two-thirds of the year, and thirteen during one-third of the year; making an average of one hundred and fifty-four, being twenty-nine less than in the preceding year. Of

Studies.	Instructors.	Text-books.	Exercises per week.	Number of students examined.
FIRST YEAR.				
Real Property.	Prof. Gray.	No text-book.	Two.	50
Contracts.	Prof. Langdell.	Langdell's Cases on Contracts.	Three.	50
Torts.	Prof. Ames.	Ames's Cases on Torts.	Three.	60
Criminal Law and Criminal Procedure.	Prof. Thayer.	No text-book.	One.	51
Civil Procedure at Common Law.	Prof. Ames.	Ames's Cases on Pleading.	One.	45
SECOND YEAR.				
Honor Course.				
Evidence.	Prof. Thayer.	No text-book.	Two.	27
Jurisdiction and Procedure in Equity.	Prof. Ames.	Langdell's Cases in Equity Pleading.	Two.	27
Property.	Prof. Gray.	No text-book.	Two.	27
Trusts, Mortgages, and other Titles in Equity.	Prof. Bradley.	No text-book.	Two.	27
Ordinary Course.				
Elective Subjects.				
Evidence.	Prof. Thayer.	No text-book.	Two.	28
Jurisdiction and Procedure in Equity.	Prof. Ames.	Langdell's Cases in Equity Pleading.	Two.	11
Property.	Prof. Gray.	No text-book.	Two.	21
Trusts, Mortgages, and other Titles in Equity.	Prof. Bradley.	No text-book.	Two.	22
Sales of Personal Property.	Prof. Thayer.	Langdell's Cases on Sales.	Two.	14
Bills of Exchange and Promissory Notes.	Prof. Langdell.	Ames's Cases on Bills and Notes.	Two.	17
Extra Subject.				
Corporations and Partnership.	Prof. Bradley.	No text-book.	One.	6

the thirty-two who were in the School only a part of the year, twenty entered at the beginning of the year and left during the year.

At the annual examination in June, 1878, forty-six students passed their examinations in the studies of the first year, twenty others having tried and failed. At the examination for advanced standing in September, 1878, three of those who had failed in June presented themselves and passed. Five new candidates also presented themselves at that examination, of whom two passed and three were rejected. Therefore the whole number of students who were entitled to enter the second-year class in September, 1878, as candidates for a degree, was fifty-one. Forty of these, having remained in the School during the year, presented themselves in June last for examination in the studies of the second year; and all but one of them passed satisfactory examinations, and so became entitled to enter the third-year class in September last as candidates for a degree. Twenty-six of the forty presented themselves in the Honor Course, and twelve of them obtained the average necessary to entitle them to the Honor degree. This is the best record by far that has ever been made by a second-year class, and it may be accounted for, partly at least, by the fact that this was the first class that was subjected to the sifting process of an examination for admission.

At the annual examinations in June last there were sixty-one applicants for examination in the studies of the first year, of whom thirty-seven passed and twenty-four failed. Of the twenty-four who failed in June, two presented themselves and passed at the examination for advanced standing in September. Of the twenty-two who failed to pass at either examination, fourteen were special students, and of the thirty-nine who passed, only one was a special student, — two facts which further show in a striking manner the effect of the examination for admission.

The quality of applicants for admission to the School as candidates for a degree upon examination appears to be improving. In 1877 (the first year that an examination for admission was held), there were sixteen such applicants, of whom only seven were admitted; and all but two of those seven were admitted wholly or in part upon examinations passed by them in Harvard College. In 1878, the number of applicants was fifteen, of whom seven were admitted and eight were rejected; and only one of the seven was excused from passing an examination in languages on account of examinations passed in Harvard College. In 1879, the number of applicants was eighteen, of whom twelve were admitted; and only two of the twelve were excused from passing an examination in languages on account of examinations passed in the College.

The year now under review was not a prosperous one in respect to numbers. It had been anticipated that this would be the year in which the School would suffer most from the combined effect of the examination for admission and the lengthening of the course to three years; for, while these measures would produce their full effect in reducing the numbers of the first-year class and second-year class, there would be no third-year class to make up for the diminished numbers in the other two classes. Still, the falling off in numbers was greater than had been anticipated, particularly in Harvard graduates. In each of the years 1876–77 and 1877–78 the number of Harvard graduates who entered was forty-seven, while in the year 1878–79 the number dropped to thirty-eight. If this falling-off had been caused by the lengthening of the course to three years, it would have been a discouraging sign; but careful inquiry led to the conclusion that such was not the fact, and that the falling off was due to accidental causes. That this conclusion was correct, the experience of the now current year has proved; for the Harvard graduates who have already entered for the year 1879–80 reach the unprecedented number of fifty-four. Of students who were not Harvard graduates, about the same number has entered the School this year as last. It is undoubtedly too soon to express a confident opinion as to the effect upon the numbers of the School of the examination for admission and the lengthening of the course, but thus far there seems to be no ground for discouragement. The number of special students is larger than could be wished, but without them a large increase in the graduates of colleges would be necessary to keep the numbers of the School good.

Little has been said heretofore, in the annual reports upon the Law School, of the need of a new building. It is not, however, because the inadequacy and unfitness of Dane Hall for the purposes of the School have not long been severely felt that silence has been kept upon the subject, but rather because it seemed undesirable to excite discontent with what we have, so long as there was no immediate prospect of our being able to get any thing better. It is unnecessary to speak of the architectural shortcomings of Dane Hall, for they are so great and so notorious as to be a discredit to the entire University. Regarding it, however, from a purely practical point of view, it has never been a good building. First, its means of ventilation are wholly insufficient for such numbers as have frequented it for several years past. This evil of insufficient ventilation has been much aggravated in the lecture-room by the great increase in the number of lectures. For many years after Dane Hall was built there were never more than two lectures in a day; and hence it was not necessary — though it was the practice — to occupy the lecture-room two hours in succession. Now, however, there are almost six lectures a day upon an average; and hence it is necessary, during four days of each week, to occupy the lecture-room four hours in succession each day; namely, from 9 A.M. to 1 P.M. The occupation of the room, however, for a single hour by a large class, and with the windows closed, makes the air of the room very foul; and yet there are no means of changing the air between two lectures which occupy successive hours except by opening the windows during the ten minutes' recess; and that renders the room uncomfortably cold during at least two-thirds of the academic year. Perhaps these things would be true, in some degree, of any room that could be constructed; but, assuming that to be so, it only shows that the Law School is in pressing need of more than one lecture-room. Secondly, the library and lecture-room are each lighted from four different directions; and it would probably be safe to say that a year has never passed in which the cross-lights of these two rooms have not ruined, or seriously injured, the eyes of one or more persons. Thirdly, by reason of its being so low studded and so near the roof, the lecture-room is a very uncomfortable place in warm weather. The difference in temperature between the lecture-room and the library, for example, on a warm day is very striking. Fourthly, when Dane Hall was erected, its location was as good as could be desired; but since it was moved sixty feet to make room for Matthews Hall, what with the paving of Harvard Square and the great increase of traffic, its location has become one of the worst that could be found in Cambridge. The noise, for example, is so great that it is impossible to make one's self heard in the lecture-room with the windows open; and yet the atmosphere of the room frequently becomes suffocating with the windows closed. Fifthly, regarded as a repository for books, the accommodation afforded by Dane Hall is very bad in quality, and in the near future it will be absolutely insufficient in quantity. During the summer, when it is necessary to keep the windows open, the books suffer greatly from dust, while during the cold weather they suffer greatly from heat. The evil arising from excessive heat is greatly aggravated by the necessity of utilizing for the storage of books all the space from the floor to the ceiling. The books also suffer from gaslight during all seasons of the year. Again, the danger to the books from fire is so great as to be a cause of constant anxiety. If the library should be destroyed, it is probably safe to say that a hundred thousand dollars would not replace it; and its value is increasing rapidly. Bad, however, as is the quality of the accommodation afforded for the storage of books, an increase in its quantity is the most immediate and pressing need of the library. Already the Librarian has been compelled to remove large quantities of books from the library into private rooms; and even this resource, to say nothing of its inconvenience, will soon be exhausted. Sixthly, within recent years loud and bitter complaints have been made of insufficient room for study in the library, and of inadequate ventilation; and though the grounds of these complaints, as regards the students, were in a measure removed two years ago, there is still no proper accommodation for the professors and instructors. Formerly, each professor occupied a private room, and it was not the practice of the professors to do any work in the library. In this respect, however, there has been a total change. The five instructors have only two private rooms at their disposal, and even these are so far removed from the library that they are unavailable for ordinary working purposes. All the work, therefore, done by the instructors in Dane Hall is now done in the library; and yet they have no suitable accommodation whatever. Behind the railing there is space for only one person to work comfortably, and that space is properly occupied by the Librarian's desk. Two professors can find places to sit, such as they are, but when more than two are present at the same time, some of them must content themselves with standing-room; and whether sitting or standing, they are a constant inconvenience to the Librarian and his assistants.

C. C. LANGDELL, *Dean.*

DECEMBER, 1879.

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — As Dean of the Medical Faculty, I submit the following Report upon the Medical School for the academic year 1878–79:

The whole number of students in attendance during the year was two hundred and fifty-three; during the first term, two hundred and forty-two; during the second, two hundred and thirty. Of these, one hundred and six had a literary or scientific degree. There were eighty-two applicants for the degree of Doctor of Medicine, of whom six withdrew their names and six were rejected. Seventy passed the examinations, and received their degrees.

The scholarships were awarded to George Lincoln Walton and Walter Prentice Bowers, of the Third Class, and to Buchanan Burr and Charles Francis Withington, of the Second Class.

The following table shows the amount and character of the instruction given: —

COURSES OF INSTRUCTION FOR 1878-79.

Instructors.	Subjects.	Number of Exercises.
	FIRST CLASS.	
Prof. Holmes	Descriptive Anatomy	Four times a week till May, with eleven additional exercises.
Drs. Porter & Beach	Practical Anatomy with Exercises in Dissection	Ten times a week from January till May.
Drs. Dwight & Quincy	Laboratory Exercises in Histology	Twice a week till May.
Prof. Bowditch	Systematic and Experimental Physiology	Four times a week.
Dr. Garland	Laboratory Exercises in Experimental Physiology	Twice a week for 5 weeks.
Dr. Hills	General and Analytical Chemistry	Twice a week, with ten additional exercises.
Dr. Hills	Practical Exercises in the Laboratory for General Chemistry	Daily.
	SECOND CLASS.	
Prof. Cheever	Regional Anatomy	Twice a week for 3 weeks.
Drs. Porter & Beach	Practical Anatomy, with Exercises in Dissection	Ten times a week till Jan.
Prof. Wood	Medical and Toxicological Chemistry	Twice a week.
Prof. Wood	Practical Exercises in the Laboratory for Medical Chemistry	Daily.
Mr. Markoe	Materia Medica, with Practical Demonstrations	Once a week.
Prof. Fitz	General Pathology and Pathological Anatomy	Twice a week.
Prof. Fitz	Special Pathological Anatomy, with Demonstrations	Twice a week.
Prof. Fitz & Dr. Cutler	Laboratory Exercises in Pathological Histology	Twice a week till April.
Prof. Fitz & Dr. Cutler	Practical Instruction in Performing Autopsies	Throughout the year.
Prof. Ellis	Clinical Medicine	Three times a week with an additional weekly exercise during the first half-year.
Dr. Knight	Practical Instruction in Auscultation and Percussion	Six times a week during the first half-year.
Dr. Cushing	Practical Diagnosis and Treatment of Diseases of the Larynx	Thirty exercises of two hours each.
Dr. Warren	Recitations in Surgical Pathology	Once a week during the first half-year.
Dr. Warren	Recitations in Surgery	Once a week during the second half-year.
Dr. Warren	The Application of Bandages and Apparatus	Once a week during the second half-year.
Drs. Warren & Cutler	Laboratory Exercises in Surgical Histology	Twice a week after Mar.
Prof. Bigelow	Clinical Surgery	Once a week till March.
Prof. Cheever	Clinical Surgery	Twice a week till April.
Dr. Porter	Clinical Surgery	Once a week after Feb.
	THIRD CLASS.	
Prof. Edes	Therapeutics	Three times a week.
Prof. Reynolds	Theory and Practice of Obstetrics	Twice a week.
Dr. Richardson	Recitations in the Theory and Practice of Obstetrics	Once a week.
Dr. Richardson	Practical Exercises in Operative Obstetrics	Twelve.
Dr. Richardson	Practical Instruction in Clinical Obstetrics	Throughout the year.
Prof. Minot	Theory and Practice of Physic	Five times a week.
Prof. Ellis	Clinical Medicine	Three times a week, with an additional weekly exercise during the first half-year.
Prof. Bigelow	Surgery and Clinical Surgery	Twice a week till March.
Prof. Cheever	Clinical Surgery	Twice a week till April.
Prof. Cheever	Practical Exercises in Operative Surgery	Fifteen.

COURSES OF INSTRUCTION — CONTINUED.

Instructors.	Subjects.	Number of Exercises.
	THIRD CLASS — CONTINUED.	
Prof. Williams	Diseases of the Eye	Once a week.
Prof. Williams	Clinical Ophthalmology	Once a week.
Prof. White	Diseases of the Skin	Once a week.
Prof. White	Clinical Dermatology	Once a week.
Dr. Baker	Diseases of Women	Twice a week.
Dr. Greenough	Practical Diagnosis and Treatment of Syphilis	Once a week during the first half-year.
Dr. Wigglesworth	Practical Diagnosis and Treatment of Syphilis	Once a week during the second half-year.
Dr. Green	Practical Diagnosis and Treatment of Diseases of the Ear	Once a week from January till April.
Dr. Blake	Anatomy, Physiology, and Diseases of the Ear	Twice a week for three months.
Dr. C. P. Putnam	Practical Diagnosis and Treatment of Diseases of Children	Once a week.
Dr. Rotch	Practical Diagnosis and Treatment of Diseases of Children	Once a week, second half-year.
Dr. Webber	Practical Diagnosis and Treatment of Diseases of the Nervous System	Once a week till Feb.
Dr. J. J. Putnam	Practical Diagnosis and Treatment of Diseases of the Nervous System	Once a week.
Dr. Folsom	Mental Diseases	Eight.
Dr. Folsom	Hygiene	Eight.
Dr. Draper	Forensic Medicine, with Demonstrations	Twelve.

The results of the examinations for admission since their establishment in 1877 are given in the following table. The total rejections are in all cases different individuals, of whom one failing in June, 1877, was successful in September, 1877; one failing in June, 1878, was successful in September, 1878; four rejected in September, 1878, were successful in June, 1879; one rejected in June, 1879, was successful in September, 1879. The others did not return for a second trial. In September, 1877, two candidates were conditioned a second time in Latin. In September, 1878, one candidate was conditioned a second time in Latin.

	1877.				1878.				1879.			
	June.		September.		June.		September.		June.		September.	
	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.
Physics.	13	5	25	3	22	4	41	18	23	5	24	7
Latin	9	2	16	5	12	2	22	10	10	3	11	3
French.......	4	1	8	1	8	1	18	0	18	3	9	0
German	0	0	1	1	2	1	2	2	0	0	2	0
Total rejected	2		1		4		5				3	

In the following table will be found the statistics of rejections at the annual examinations for the past four years: —

JUNE EXAMINATIONS.

STATISTICS OF REJECTION.

		FIRST CLASS.						SECOND CLASS.						THIRD CLASS.													
		Anatomy.		Physiology.		General Chemistry.		Medical Chemistry.		Materia Medica.		Path. Anatomy.		Theory and Practice.		Clinical Medicine.		Surgery.		Clinical Surgery.		Therapeutics.		Obstetrics.	
			Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.
1876	Passed	44	35	41	36	34	32	54	5	53	8	52	13	47	2	40	16	41	8	33	8	46	24	36	30
	Rejected	24		24		16		3		5		8		1		8		4		4		15		16	
	Total	68		65		50		57		58		60		48		48		45		37		61		52	
1877	Passed	63	19	46	38	42	38	45	16	44	21	47	25	52	8	50	13	57	0	46	9	49	16	51	10
	Rejected	14		29		26		9		12		12		5		8		0		5		10		6	
	Total	71		75		68		54		56		59		57		58		57		51		59		57	
1878	Passed	56	23	52	32	49	22	54	12	52	20	56	16	53	5	53	11	51	0	54	0	48	7	36	36
	Rejected	17		25		14		8		13		11		3		7		0		0		4		21	
	Total	73		77		63		62		65		67		56		60		51		54		52		57	
1879	Passed	73	17	59	37	33	52	64	14	57	22	59	15	56	0	64	1	58	4	60	1	57	16	51	15
	Rejected	15		36		36		11		17		11		0		1		3		1		11		9	
	Total	88		95		69		75		74		70		56		65		61		61		68		60	

The three tables which will be found below show very interesting results in connection with the change in the plan of instruction. They prove very clearly that, as the new system became established, the number of students who devoted three full years to their studies in this School steadily increased, while the standard of preliminary education as steadily rose.

RELATIVE NUMBER OF STUDENTS DURING THE TWO TERMS.

Year.	First Term.	Second Term.
1870–71	301	67
1871–72	203	97
1872–73	170	110
1873–74	175	142
1874–75	192	166
1875–76	192	178
1876–77	230	212
1877–78	219	208
1878–79	242	230

NUMBER OF TERMS SPENT AT THE SCHOOL BY GRADUATES.

	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.
Spent six terms.........	3 5%	8	22	14 47%	25 69%	40 65%	41 85%	62 88%
Spent five terms........	0	3	2	7	5 13%	9	4	2 2%
Spent four terms........	8 14%	8	6	6	4 11%	8	3	3 4%
Spent three terms......	18 32%	15	5	0	2 5%	1	0	2 2%
Spent two terms........	27 48%	7	3	8 10%	0	3	0	1 1%
Total graduated.......	56	41	38	30	36	61	48	70

SOURCES OF STUDENTS, AND NUMBER HOLDING DEGREES.

	1870–71.	1871–72.	1872–73.	1873–74.	1874–75.	1875–76.	1876–77.	1877–78.	1878–79.	1879–80.
Students from British Provinces.	30 10%	34	26	15	12	4 2%	0	0	1	1
Students from elsewhere than New England States and British Provinces.	16 5%	9	12	11	16	20 10%	24 10%	22 10%	23 9%	18 7%
Students with literary or scientific degrees.	72 23%	59	59	66	86	82 42%	101 44%	95 44%	106 44%	121 48%

During the year a legacy of two thousand dollars has been received from the estate of the late Quincy Tufts.

Drs. T. M. Rotch and E. W. Cushing were appointed to fill temporarily the places of Drs. J. P. Oliver and F. I. Knight during the illness of these gentlemen.

The annually increasing list of teachers is an index of the policy of this School to furnish the largest amount of clinical instruction compatible with proper supervision, and to give it under conditions similar to those which must afterwards exist between physician and patient.

CALVIN ELLIS, *Dean.*

To the President of the University: —

Sir, — I beg to submit the following Report upon the Dental School for the year 1878–79: —

The number of students, as shown by the Catalogue, was thirteen, of whom six were first-year, five second-year, and two third-year students. It will be observed that the causes, whatever they may be, which have acted to reduce the numbers of our students still prevail, and the number remains without increase. Meanwhile, the number of schools which offer the inducements of short terms and easy curricula is increasing, and they attract even ambitious students.

The instruction given by the Medical Professors, which has been attended by our students in common with the Medical Class in Anatomy including Dissection, Physiology, and Chemistry, is the same for the first-year students of both schools.

The Professor of Clinical Surgery has given twelve lectures on Surgical Pathology, and the Professor of Surgery two lectures on Oral Surgery and one on Anæsthetics and their administration, which have been attended by our second-year students, also in common with those of the Medical School. This year's class have also listened to six lectures on Gestation and Diseases of Women affecting the oral cavity, given by the Assistant Professor of Operative Dentistry.

The Infirmary of the Dental School is an out-patients' department of the Massachusetts General Hospital. Here are performed all operations upon the mouth and teeth, with the exception of the insertion of artificial teeth. The smallness of our corps of students has made it impossible to answer all demands, but, on the other hand, has rendered it possible for each student to receive more personal assistance and attention. Instruction in this department is mainly clinical, and has been given by the Professor and his assistants on the afternoons of five days of each week throughout the year, — the Professor or one of his assistants, together with the Demonstrator, being present on each afternoon. The operations are performed by the students under the eye of an instructor, and personal assistance is rendered when required. Clinics have been given and occasional lectures, as subjects and opportunities offered.

In the Mechanical Department the Professor has given two hours of each week to instruction, devoting one hour to lectures and one to clinical teaching. The Demonstrator has been present in the Laboratory from nine o'clock till twelve every morning of five days in each week, for clinical teaching and assistance. Patients have at no time been wanting to give full employment to all the students.

Dr. Wilson, who has served the School so long and faithfully as Demonstrator in charge of both departments, and whose sickness was mentioned in my last report, was compelled, by long-continued ill-health, to resign his charge at the end of the year 1877–78. A change was then made in the organization. Instead of a single demonstrator for both departments, a demonstrator was appointed for each; namely, Dr. Henry F. Dunkel in the Operative Department, and Dr. George F. Grant in the Mechanical Department, both of whom are graduates of the School, and both of whom have served with exemplary faithfulness and success.

Dr. Arthur Tracy Cabot, appointed at the beginning of the year to the position of Instructor in Oral Surgery and Pathology, made vacant by the resignation of Dr. Rollins, has given one hour or more of each week to instruction accompanied by demonstration with the microscope, and has also taught the use of the microscope and the method of preparing sections.

The Instructor in Dental Therapeutics has also given one hour or more of every other week to instruction in the subjects pertaining to his department.

At the end of the year, Dr. Moffatt, Professor of Operative Dentistry since the foundation of the School, felt compelled to resign, by reason of his proposed periodical absence from home to practise in Paris; and Assistant Professor N. W. Hawes shortly after followed his example.

THOS. H. CHANDLER, *Dean*.

DEC. 8, 1879.

TO THE PRESIDENT OF THE UNIVERSITY:—

SIR,—I have the honor to submit the following Report upon the Lawrence Scientific School for the academic year 1878–79:

The number of students registered during the year was seventeen. They were classified as follows: eight in Engineering, three in Natural History, two in Mathematics, four in special courses.

Mr. H. N. Wheeler gave instruction in Spherical Trigonometry and Analytical Geometry to students of the first year in Engineering. They attended his exercises, one hour daily, five days in the week. Trigonometry was taught mainly by notes, with practical applications to solid geometry and astronomy. In Analytical Geometry, Howison's text-book was used.

Mr. F. W. Dean gave instruction in Mechanical Drawing and Surveying. The course in Mechanical Drawing included problems in Descriptive Geometry, Plotting Surveys, Isometric Projections, and Tinting, and occupied six hours a week. In Surveying, Gillespie's treatise was used as a text-book and Henck's field-book. The exercises consisted of recitations and field-practice with the compass, transit, and level.

Instruction in Physical Geography and Geology was given by Mr. W. M. Davis. The exercises consisted of recitations, lectures, and field-work.

Professor Shaler gave instruction in Geology and Palæontology. The exercises consisted of recitations and lectures three times a week, with laboratory work and excursions.

Dr. Mark gave a course of lectures in Zoölogy, with laboratory exercises.

Mr. M. E. Wadsworth gave instruction in Lithology, mainly devoted to laboratory work.

Instruction in Botany was given by Dr. Goodale.

In Physics, the exercises consisted of recitations and laboratory work, under direction of Assistant Professor Trowbridge; and a course in Elementary Physics, under Mr. Robert Willson.

One student attended, twice a week, Professor J. M. Pierce's course in Analytical Geometry.

In French, instruction was given by Assistant Professor Jacquinot.

In German, instruction was given by Mr. E. S. Sheldon and Mr. H. B. Hodges.

Professor Cooke had a class in Mineralogy three times a week.

In Chemistry, instruction was given by Assistant Professor H. B. Hill.

Mr. C. H. Moore gave instruction in Free-hand Drawing.

The first year's class in Engineering had three exercises a week, under Professor Eustis, in Descriptive Geometry, and its applications to shades, shadows, perspective, and stereotomy. This course was attended by one Senior and one Junior of the undergraduate department.

The second year's class in Engineering had five exercises a week, under Professor Eustis, in the Differential and Integral Calculus.

Professor Eustis gave instruction five times a week in Wood's Analytical Mechanics and Wood's Bridges and Roofs.

H. L. EUSTIS, *Dean.*

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — I respectfully submit the following Report upon the Bussey Institution for the year 1878–79: —

Nine students were connected with the School during the year, not counting one person whose name was printed in the Catalogue in consequence of representations which turned out to be incorrect. Four of these students were in regular standing, and one of them was graduated in June. The others were special students, one of whom took the course in Agriculture, while two took the course in Horticulture, and two studied Applied Zoölogy.

Instruction was given regularly throughout the year in the following branches: Agriculture, by Mr. Motley; Horticulture, by Mr. Watson; Botany, by Professors Goodale and Farlow; Applied

Zoölogy, by Professor Slade; and Agricultural Chemistry, and Chemical Analysis, by Professor Storer.

The most noteworthy occurrence in the year was the graduation of a student, an event which necessitated the definition of the title of the degree, and of the requisitions for it. By vote of the Corporation, it was determined that the degree for students of the Bussey Institution shall be that of "Bachelor of Agricultural Science," and that the diploma shall be printed in English. It is of interest to note, in this connection, that the average number of students connected with the Bussey Institution has been seven and a half per annum during the eight years of its existence. In this estimate no account is taken of the students who attended certain special popular courses in Botany and Horticulture, given in 1876 and 1878, as mentioned in the Reports for those years. The number of students has slowly increased of late years, while their character has decidedly improved. In the earlier days of the School all the students were special. Each of them took only one or two studies and neglected the rest; but now there are every year several students in regular standing who attend all the exercises at Jamaica Plain, or substitute, for one or two of the Bussey courses, an equivalent amount of study in some other department of the University.

The School was greatly strengthened by the appointment, toward the close of the year, of Messrs. Charles E. Faxon, Instructor in Botany, Edward Burgess, Instructor in Entomology, and Lester S. Ford, Demonstrator in Zoölogy. Mr. Faxon will give botanical instruction in place of that formerly given, by alternate half-years, by Professors Goodale and Farlow. He has the very great advantages of living in the vicinity of the School, of having no duties in other departments of the University to occupy his time and thought, and of being more intimately acquainted than any one else with the plants of this immediate locality. Students of the Bussey Institution still have, as before, the privilege of studying Advanced Botany (both phenogamic and cryptogamic) with Professors Goodale and Farlow at Cambridge. Mr. Burgess's Entomology will be a positive addition to the teachings of the School, no instruction in this branch having been given at the Bussey Institution since 1872. The appointment of Mr. Ford as Demonstrator in Zoölogy, through the interest of several gentlemen desirous of promoting veterinary science, will enable the Zoölogical Department to give better opportunities for dissection and more detailed instruction in Histology and Pathology. The facilities for horticultural instruction have been decidedly increased by the recovery of a block of greenhouses which had been lent to the Arnold Arboretum some years since, and kept in constant use by that department until the close of the current year. This acquisition gives abundant room for the students to work, and places at the disposal of the Instructor of Horticulture three distinct houses, which permit him to exhibit to the students the advantages of growing different kinds of plants at the temperatures best suited to each kind. Before these houses were returned to the School, it was a very difficult matter to grow in a single glass-house the variety of plants used in the practical work of the students. It is to be regretted, however, that the School will be put to the expense of repairing these houses and their appurtenances at a time when it has no money to spare.

By the will of Mr. James W. Harris, late Secretary of the University, his agricultural library was bequeathed to the Bussey Institution. This legacy was particularly acceptable, as an earnest of the kindly feeling which Mr. Harris had always exhibited in his official relations with the Institution. The bequest comprised seventy-five volumes and parts of volumes. With this exception, the Library of the School increased but little during the year, no money being available for buying books; but a very important connection has been made between the Bussey Institution and the College Library at Cambridge, thanks to the liberality of Mr. Winsor, Librarian of the University. Boxes of books are now brought regularly from Gore Hall to the Bussey Institution; and through the courtesy of Mr. Henry A. Whitney, President of the Boston and Providence Railroad, these boxes are transported gratuitously upon the railway.

F. H. STORER, *Dean*.

JAMAICA PLAIN, Nov. 20, 1879.

To the President of the University:—

Sir,—I have the honor to submit the following Report upon the condition and progress of the Botanic Garden and Arboretum during the year ending August 31, 1879:—

BOTANIC GARDEN.

The work of rearranging the hardy plants in the Garden has been continued during the year. The southwest portion of the Garden has been cleared by the removal of an old shrubbery and a few unimportant trees; and this space, after having been thoroughly trenched and enriched, has been planted with the Apetalous orders, thus completing, so far as the limited area of the Garden will permit, the arrangement of the Exogenous division of flowering plants.

Additional rockeries, covering 2,690 square feet of ground, have been built and planted during the year; and the exceedingly rich rock-garden collection, embracing herbs, bulbs, and ferns, now contains probably the largest number of species of North American plants of these classes which has yet been brought together, and forms the most interesting and successful feature of the Garden.

A small rockery has been built during the year in one of the cold-houses, for the cultivation of the ferns of Western North America, plants which, owing to the peculiar conditions under which they grow naturally, have heretofore with ordinary pot cultivation barely been kept alive. Their improved condition since they have been planted out on this rockery indicates, it is hoped, that a method has been found for the successful cultivation of these interesting plants.

Necessary repairs have been made in the glass-houses during the year, and the houses are now in good condition, with the exception of the old cactus-house and the central conservatory. These are in such an advanced stage of decay that mere temporary repairs on them are no longer justifiable.

An enumeration of the plants growing in the Garden made during the year shows that the collection consists of 5,901 species, representing 1,519 genera. Of these, 3,641 species are hardy, and 2,260 species require protection during the whole or a portion of the year.

The important features of the collection are 247 species of Orchids, 387 species of Ferns, 42 species and varieties of *Selaginella*, 583 species of Cacti and other succulent plants, 46 species of Palms, and 583 species of Trees and Shrubs.

No effort has as yet been made to increase the collection of Grasses, Sedges, Rushes, and other hardy Endogens, as the rearrangement of the Garden has only reached this division during the past year. These plants, with some important additions to the orders already arranged, will increase the number cultivated in the Garden to near 9,000 species, and will fill it to its very utmost capacity.

As my connection with the Garden ceases with the present year, I shall briefly recapitulate what has been accomplished since the 1st September, 1872, the date at which I assumed control of it. At that time the collections, consisting of probably not more than 2,000 species, were scattered through the Garden without order or arrangement, without labels, and often in positions practically inaccessible to the visitor or student. The soil had become greatly impoverished, and much of the Garden required redraining, the old brick drains which had formerly been laid through some parts of it having either fallen in or become choked up. Such duplicate trees as were scattered irregularly through the Garden, injuring its appearance and diminishing its capacity to contain other plants, have, as far as possible, been removed; the old drains have been renewed, and many new ones laid; and the whole Garden has been thoroughly trenched and manured.

The hardy plants (trees, shrubs, and herbs) have been planted in the regular sequence adopted in herbaria, so far as such a sequence could be followed without sacrificing old and valuable trees or entirely changing the general features of the Garden, which, although faulty, it seemed desirable to retain. By the present arrangement, each plant can be readily reached, either from one of the main walks or from an interior grass walk, and each plant can be examined in connection with its immediate allies.

Every plant in the Garden, as far as practicable, has been labelled with a permanent printed label, giving the name of the plant, its habitat, and often its common name, when this is of general acceptance. The number of species of living plants in the Garden has probably more than trebled, although, unfortunately, there is no record of the number formerly cultivated.

A rock garden, largely occupying what was formerly waste ground, and covering 7,003 square feet, has been built and planted.

The glass-houses have been thoroughly repaired and largely remodelled, and a new heating apparatus has been put into the principal range. These were formerly heated by four distinct fires; by the present arrangement a greater amount of heat is obtained from a single fire, and at a very considerably reduced expenditure both in coal and labor. New pits and frames have been built, and the gardener's house has been thoroughly repaired.

A regular correspondence has been established, extending to almost every country in the world, and resulting in an interchange of plants and seeds which has greatly enriched and benefited the Garden both directly and indirectly. A record of such interchanges has only been kept during the last five years, during which time they have, however, increased remarkably, and probably now equal or exceed in volume the exchanges of any other botanical establishment. During the past year the Cambridge exchanges have reached a total of 19,410 plants and 4,467 packets of seeds, while during 1878 the exchanges of the Royal Gardens at Kew, the largest and best-endowed botanical establishment in the world, were only 15,206 plants and 3,702 packets of seeds.

I am happy to be able to report that these very expensive changes and improvements in the Garden have been begun and carried out without diminishing the Garden fund. The unexpended income of that fund amounted on the 1st September, 1872, to $3,237.33; on the 1st September, 1879, it had increased to $3,365.94. During the seven years, $13,855 have been contributed by friends of the Garden, for its improvement and development; and these contributions have alone made it possible to bring the Garden to its present state of efficiency. The number of visitors to the Garden has largely increased during the last three years, but, unfortunately, it has not been practicable to keep any record of their number.

ARBORETUM.

Much attention has been given to perfecting a scheme for permanently arranging and planting the Arboretum. Pending a satisfactory solution of the difficulties which this problem presents, and which have been alluded to in previous reports, all the young trees and shrubs in the nurseries have been again moved, in order to assure their safe removal, later, into permanent positions.

A large correspondence has been maintained with persons interested in tree-planting in different parts of the country, and has resulted in the formation of extensive experimental plantations. Reports in regard to these are constantly received, and will be collated and published as soon as they have extended over a period of time sufficiently long to give conclusive results.

INTERCHANGE OF PLANTS AND SEEDS.

The interchange of plants and seeds with other botanical and horticultural establishments has been continued. There have been 12,004 plants and 2,623 packets of seeds distributed during the year, as follows, as against 18,919 plants and 1,267 packets of seeds distributed during the previous year: To all parts of the United States, 9,592 plants and 578 packets of seeds; to Great Britain, 1,145 plants and 886 packets of seeds; to the Continent of Europe, 1,231 plants and 911 packets of seeds; to Australia, 240 packets of seeds; to New Zealand, 8 packets of seeds; and to Canada, 36 plants. Of the above, 2,764 seedling trees and shrubs have been distributed from the Arboretum to different portions of the United States, 632 to Great Britain, and 1,092 to the Continent of Europe. There have been, in addition to the above, 10,404 plants raised in the propagating-houses of the Arboretum for the Botanic Garden. There have been contributed to the Garden and Arboretum during the year 7,406 plants and 1,844 packets of seeds from 121 donors, as against 5,446 plants and 1,786 packets of seeds received during the previous year from 108 donors. Of these, 5,416 plants and 516 packets of seeds have been received from the United States; 548 plants and 202 packets of seeds from Great Britain; 267 plants and 899 packets of seeds from the Continent of Europe; 100 packets of seeds from Australia; 1,108 plants (bulbs) from Algiers; and 67 plants and 107 packets of seeds from Mexico.

I take this opportunity to renew my thanks to the Trustees of the Massachusetts Society for Promoting Agriculture, who with great liberality have continued their annual grant of $2,500 to be expended in developing the Botanic Garden and Arboretum, in such proportions as might seem expedient.

C. S. SARGENT, *Director.*

To THE PRESIDENT OF THE UNIVERSITY: —

SIR, — In printed bibliographical work the Library has, during the year, made good the promise of last year's Report. The four Bulletins have embraced some studies of books and subjects that gave them an interest more lasting than would belong to a bare current list of accessions. A part of the matter in them has been reissued as numbers of a series of Bibliographical Contributions, including the following: —

An index to the books and memoirs of the Transits of Mercury, by Professor Holden, of the Naval Observatory at Washington.

An annotated book-list on the life and works of Michelangelo, by Professor Charles Eliot Norton, of the University.

A list of the apparatus in the different laboratories of the United States available for scientific research involving accurate measurements, prepared under the direction of Professors Gibbs, Pickering, and Trowbridge.*

An annotated list of the more valuable and interesting books and autographs, belonging to the collection bequeathed to the Library by the late Hon. Charles Sumner, which was prepared by the joint labors of several members of the Library staff.

A list of available and important books on the flora of different countries, by Professor George L. Goodale, of the Botanic Garden.

To these may be added two by the Librarian: —

A bibliography of the earlier editions of Shakespeare's poems.

An inquiry into the authorship of the several pieces which constitute the Pietas et Gratulatio, the memorial volume, issued by the College in 1761, on the occasion of the death of George II. and the accession of George III.

Beside these, three other monographs were carried forward, but not completed, during the year.

In December, 1878, the first experimental issue of a consolidated list of serials, taken currently by the libraries of the University and by the principal libraries in Boston, was brought out, — imperfect, as was expected, since the catalogues of none of these libraries grouped all the publications of this sort together, and not a few were accordingly overlooked. It seems desirable that at some early day a revised edition should be prepared.

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* The portion of this relating to the laboratories of the Johns Hopkins University has since been reprinted, with some additions, in the annual report of President Gilman.

The most considerable publication of the year has been Mr. Scudder's Catalogue of Scientific Serials, 1633–1876, making an octavo volume of about 370 pages. The list concerns almost exclusively pure science, and renders desirable the publication of a similar catalogue of the serials of applied science and technology. The compiler has given several years of intermittent labor to it, and has had the co-operation of scholars in all the countries included. In extent, the enumeration far exceeds any thing previously printed, and may be taken as very nearly covering an ample field in all its details. Mr. Scudder began the work at the instigation of a committee of the Academic Council of the University who, in 1876, had conferences with gentlemen representing the principal libraries of science in Boston, for the purpose of devising some method of co-operation in enlarging the facilities for scientific work in this vicinity. As a preliminary step, it was deemed desirable to make what did not exist; namely, as complete a list as possible of all publications in pure science, past as well as present, which were serial in their nature. This list was perfected in Mr. Scudder's hands, and by the recommendation of the Council the President and Fellows authorized its publication, upon subscriptions sufficiently numerous being received; and this Library was intrusted with the care of it. The volume constitutes No. 1 of the Special Publications of the Library. It has found purchasers in all parts of the world, and has met with cordial appreciation.

It is worthy of remark that the bibliographical spirit was never so rife in literary centres the world over as at present, and some part of this activity is traced to a kind of regeneration in the study which has taken place in this country. During the year, the English Society of Arts has presented a report to the Prince of Wales, its president, proposing the printing of a universal catalogue of printed books, thus initiating the discussion which must always precede a great work. The Trustees of the British Museum are contemplating the printing of a catalogue of books in English published before 1640. The Advocates' Library at Edinburgh has completed its printed catalogue. The Bodleian has already begun, and the British Museum is considering, the supplementing of their main authors' catalogue with one of subjects, a help to the user that the libraries of America, almost alone among the great libraries of the world, have hitherto had the courage to undertake. No more important work has been done in the cataloguing of collections than the general indexes of their resources, which the Library of Congress and the Boston Athenæum are now carrying forward. The Spanish student finds in Mr. Whitney's Catalogue of the Ticknor Collection, just completed, a special bibliographical monograph, than which few were ever more carefully prepared. Rarely will a catalogue be found more serviceable to the average student than that, still unfortunately incomplete, now issuing from the Brooklyn Library. It is also a subject for congratulation with all librarians that private enterprise, and a courage that obstacles could not check, have carried through the publication of the American Catalogue, as a representation of our current literature.

The work of removing the books from the old parts of the building, and of reclassifying them in the new shelving, has gone on during the year with as much rapidity as could be expected from the force under Mr. Arnold's direction. The classification has been made with great care, always with an eye to the practical convenience of readily finding cognate books, rather than in accordance with any philosophical system of the division of knowledge. The idea has been to make such an arrangement as would best accommodate the officers of the University who may have occasion to work at the shelves. The shelf-lists, consequently, will constitute, in effect, a sort of classed catalogue, more useful in some ways than the stricter bibliographical apportionments pertaining to the subject card-catalogue. To secure this, and to alter the shelf-numbers on the cards, involve an amount of patient labor which precludes any great degree of expedition. About 130,000 volumes (not all, however, yet classified) have now been conveyed to the new stack, leaving about 53,000 still in the old part; and this represents, approximately, the ultimate division of the books, it being the intention to rearrange the scientific part of the collection in the old portion of the building, when it is remodelled.

One of the grand divisions which have been permanently rearranged during the year is that of Ballads and Legends (or *popu-*

lar literature in its technical sense), and Folk-lore generally. Owing to the assiduous interest manifested in this department by Professor Child, it is doubtful if a superior collection, as a whole, exists elsewhere. Some of the unique books, already appropriated by great European collections, are of course wanting; but copies have, in some cases, been procured, and the manuscript part of the collection is of peculiar value.

Mr. Arnold has made to me the following report: —

The number of volumes already definitely shelved in the new stack is 35,373, classified as follows: —

American History and Geography	13,601	volumes.
,, Genealogy	314	,,
,, Biography	881	,,
British History and Geography	3,630	,,
French ,, ,, ,,	3,525	,,
,, Biography and Literature (not yet complete)	2,569	,,
German History	1,042	,,
Reference-books in cataloguing alcoves	2,441	,,
Reference-books and periodicals in delivery room	3,276	,,
Directories	530	,,
United States, State, and Municipal Registers	502	,,
Harvard University History and Miscellany	312	,,
Folk-lore	2,750	,,
	35,373	,,

In the shelf-arrangement the size of volumes has, in general, been disregarded, except that the lower shelf of each range is devoted to folios and quartos, and except when, without serious derangement of the classification, an additional shelf could be gained by separation of sizes. The endeavor has been to make as elaborate a classification as is likely to be of advantage to those who consult the shelves. Different editions of a work are arranged in order of date. The history of each country is arranged in strictly chronological order, and includes, in addition to works exclusively historical, political treatises and pamphlets on questions of contemporary interest, and all biographies of historical or political importance. Thus, the history of the American Revolution is divided as follows: 1. General histories of the Revolution. 2. Histories of special States. 3. Political treatises, in approximate order of publication. 4. Military and naval history, in chronological order. 5. Life and writings of Washington. 6. Political biographies. 7. Military biographies.

Under the head of Geography are included Topography, Travel, Sketches, &c.

Literature is arranged by periods, according to some generally accepted division. Thus, French literature is grouped in nine classes:— 1. History of Literature and General Collections: *a.* General histories of literature. *b.* Literary history by departments, towns, &c. *c.* History and criticism of special classes of literature. *d.* Literary history by periods. *e.* Miscellaneous collections of literature, chrestomathies, &c. 2. Literature of the twelfth and thirteenth centuries. 3. Fourteenth and fifteenth centuries. 4. Sixteenth century. 5. First half of seventeenth century. 6. Age of Louis XIV. 7. Eighteenth century. 8. First half of nineteenth century. 9. Second half of nineteenth century.

The literature of each period is further divided into various classes, such as collected works of prose writers, oratory, literary criticism, fiction, poetry, drama, &c. These minor divisions are frequently arranged in the alphabetical order of authors, when no better order seems feasible and if the requirements of the space permit. Biographies of authors, also special bibliographies and critical essays on single authors, are placed with their works.

The collection of folk-lore includes, in addition to legends and superstitions, early ballads and tales of popular origin, and proverbs; mediæval romances follow as an appendix. It does not include works relating to mythology proper, which will immediately precede folk-lore in the shelf-arrangement, nor many important works which appear as parts of more general collections, and will be shelved elsewhere, nor, as a rule, modern poetic renderings of ancient legends. Modern ballads will find their place with their respective literatures or with music. The arrangement of this collection is primarily linguistic, and there are various subdivisions. The order of arrangement and the number of volumes in each division are as follows:—

I. General Collections	240	volumes.
II. Indo-European:—		
1. Germanic:—		
a. English and Lowland Scotch	429	„
b. Dutch	10	„
c. Flemish	13	„
d. Frisian	4	„
e. Icelandic	27	„
f. Danish and Norwegian	80	„
g. Swedish and Faroe	31	„
h. German	591	„
i. Swiss (almost exclusively German-Swiss)	42	„
2. Romanic:—		
a. Spanish	84	„
b. Portuguese	12	„

c. French	151 volumes.
d. Italian	111 „
e. Roumanian	23 „
3. Keltic (Breton, Erse, Irish, Cornish)	40 „
4. Greek (Modern)	34 „
5. Slavonic: —	
a. Russian and Little Russian	121 „
b. Servian	35 „
c. Bosnian, Montenegrin, and Dalmatian	8 „
d. Croatian, Slovenian, and Bulgarian	13 „
e. Bohemian, Moravian, and Slovak	42 „
f. Polish and Sorabian-Wendish	53 „
g. Lithuanian	10 „
6. Aryan: —	
a. Indian	35 „
b. Persian and Armenian	19 „
III. Semitic (Arabian and Hebrew)	49 „
IV. Scythian: —	
1. Finnish and Lappish	33 „
2. Esthonian	8 „
3. Hungarian	20 „
4. Turkish and Mongol	12 „
V. Miscellaneous (Basque, African, Japanese, Chinese, Polynesian, Eskimo, North American Indian, &c.)	30 „

The collection of mediæval romances numbers 340 volumes, and is classified as follows, according to the scheme adopted by Didot in his "Essai de classification des romans de chevalerie:" —

1. General Collections.
2. Breton, or King Arthur Cycle.
3. Spanish Cycle.
4. Charlemagne Cycle.
5. Romances of the Crusades.
6. Romances of Classical Antiquity.
7. Romances of Love and Adventure.
8. Theological and Allegorical Romances.
9. Miscellaneous.

As the work of arranging the books on the shelves has gone on, the preparation of new shelf-lists, and the re-marking of the catalogue cards with the new shelf-numbers have kept pace with it. The number of shelf-lists prepared is 44, and the number of cards already marked may be safely estimated at about 125,000.

In addition to the shelving of the bound volumes, and of many hundreds of pamphlets in boxes and bundles, the pamphlet files have been carefully examined, twelve or fifteen thousand pamphlets on American history, politics, and biography taken out and rearranged in a separate alphabetical order, preparatory to classification for binding, and several thousand classified notes made of pamphlets remaining in the old files. This work on the pamphlets was done mainly by the voluntary assistance of Mr. Henry Prince Warden, of the Class of '78.

GEORGE FRANCIS ARNOLD,
Curator of the Shelves.

The total accessions of the University Library for the year are considerably in excess of those of last year, and of any previous year, so far as our records show: —

Gore Hall (College Library)	7,407	volumes.
Law School	533	,,
Scientific School	70	,,
Divinity School	523	,,
Medical School	0	,,
Museum of Zoölogy	1,356	,,
Observatory	293	,,
Botanic Garden	100	,,
Bussey Institution	56	,,
Peabody Museum	51	,,
	10,389	,,

Of these accessions, those credited to Gore Hall are net, the actual additions having been 7,711, from which deduction has been made for 304 volumes parted with through exchange. The gifts of the year include those of Dr. Samuel A. Green, the family of the late Rev. R. M. Hodges, D.D., and the United States Coast Survey, as the most considerable of the 659 donors in all. The library of the late Martyn Paine, M.D., of New York, was received April 9, amounting to 3,097 volumes, 115 pamphlets, 4 maps, and a portrait of his son, in whose remembrance the bequest was made. A much smaller number of the Paine bequest than was anticipated proved to be duplicates, so that 2,099 volumes were added from it to our catalogue.

The most noteworthy addition of the year, however, was that made through Mr. Agassiz's generosity, by the purchase of Dr. Hagen's private entomological library for the Library of the Museum of Comparative Zoölogy. It consists of 762 volumes and about 3,000 pamphlets. The whole is still under the immediate care of Dr. Hagen in his apartments at the Museum, and to it has now been transferred those works on the same science which formed part of the general collection in the same building. Mr. Scudder, himself well known as an entomologist, has made to me a detailed report which verifies my belief that this collection now constitutes the most considerable of all American entomological libraries. I hope to print this bibliographical monograph on the Entomological Libraries of America in a future number of the Library Bulletin. The addition of pamphlets during the year has also been large, 6,022 being credited in the account to Gore Hall, a larger number than before reported for at least ten years, while for the departments the 3,000 of the Hagen purchase for the Museum make the most considerable accession.

We may set down, then, the extent of the University Library in its several sections at the close of the academic year, as follows:—

	Volumes.	Pamphlets.
Gore Hall (College Library)	182,500	176,000
Law School	17,500	
Scientific School	2,200	200
Divinity School	17,500	
Medical School	2,000	
Museum of Zoölogy	13,300	8,000
Observatory (Phillips Library)	7,000	300
Botanic Garden	3,000	1,200
Bussey Institution	2,100	750
Peabody Museum	320	350
	247,420	186,800

The Library of the Medical School, which needs space for its systematic administration, awaits the construction of a new building for that department of the University, before it takes on the development which belongs to it.

In order to render the central collection at Gore Hall of more regular use to that department farthest removed from it, an express-box has been established, which runs weekly between Cambridge and the Bussey Institution at Jamaica Plain.

The Library of the Botanic Garden, which has heretofore been exposed to the danger of fire, and has been inconveniently scattered in several apartments, will shortly be united in a new fire-proof structure. This change will enable Mr. Watson, its librarian, to regulate the details of its administration in a more orderly manner, and to make his reports of statistics more definite. It is also likely to raise practically a question I have already discussed. With protection from fire secured, the principal objection against the transfer of valuable books from Gore Hall to that departmental library is removed. Books which are exclusively used by gentlemen working at the Herbarium should now be kept there instead of in Gore Hall. It is with me a fundamental principle that books should be used to the largest extent possible and with the least trouble.

The same argument for use, and the insecure condition of the books of the Divinity School Library by reason of danger from fire would suggest the transfer in due time of a large part of that valuable collection to Gore Hall. I am informed that such a disposition of many of the books would be deemed expedient by the Faculty of that School when the time comes for rearranging the theological portion of the College Library. By leaving in their present quarters such books as are frequently used at Divinity Hall, and such as are already duplicated at Gore Hall, a considerable collection would still remain in immediate connection with the School. The rest of the Library would be safer and more generally accessible, if removed hither.

I am glad to report that one work, of which I spoke in my last Report, has been done. All the printed and manuscript matter, illustrating the history of the University and its departments, has now been collected together, arranged, and bound in volumes; and the collection, as it is now shelved by itself, numbers over three hundred volumes, as will be seen by reference to Mr. Arnold's figures, already given. It is not unlikely that matter which has as yet escaped attention will from time to time be added to the collection.

I can report a continued increase of use of the Library. Last year I could only give the result of the new system of registering loans for a part of the year, as it had not been put in operation during the earlier months. This year the record is complete: —

	Loaned.	Hall use.	Total.
1878. September 26–30....	1,073	160	1,233
October.............	4,292	1,297	5,589
November..........	4,595	1,106	5,701
December..........	4,056	1,132	5,188
1879. January............	4,574	1,291	5,865
February...........	4,244	1,218	5,467
March.............	4,931	1,217	6,148
April..............	4,318	1,268	5,586
May...............	3,786	909	4,695
June...............	2,316	587	2,903
July...............	1,204	253	1,457
August.............	1,016	259	1,275
September 1–24.....	891	229	1,120
	41,296	10,921	52,217

One kind of use is about double that of last year; namely, the delivery of reserved books and periodicals for use overnight.

It should be remembered that the very large use of new books (exposed for examination), general reference books, and those books reserved by Professors as collateral reading for their classes, does not enter into our statistics of use at all. No record of it is possible, without annoying the users by making them act as recorders,—an irksome work, which it is inexpedient to impose.

The reserving of books by instructors is a practice that started four or five years ago, when teachers in the department of history began the experiment. As gentlemen of other departments have recognized the advantages of thus reserving books for their classes, the system has become an important adjunct to the methods of instruction, and it brings the Library very happily into closer connection with the great body of the students. When I came to this post two years ago, I found but two or three gentlemen following this practice. It seemed to me of first importance, and I did what I could to foster it. Last year twenty-one of the instructors availed themselves of the method, and so far this year thirty-four have sent in lists, which now include several hundred volumes. Two additional alcoves — now four in all — have been appropriated for the use of such books.

The use of books goes on increasing naturally if the conditions are favorable. It is a librarian's province to watch those conditions and to prevent relapse. Diligent administration, considerate forbearance, care that no rule is enforced for the sake of mere outward uniformity, and the establishment of reciprocal confidence between the government and the users of the library, open the way to many relaxations of old-established prohibitions, which could not be safely allowed if a less conciliatory spirit prevailed. There should be no bar to the use of books but the rights of others, and it is to the credit of the mass of library users that, when a librarian manifests that single purpose, he can safely be liberal in the discharge of his trust.

By the resignation of Mr. Fiske the immediate charge of the catalogue work passed April 1st into the hands of Mr. Samuel Hubbard Scudder, a gentleman of experience in bibliographical work, from whose care and discernment we may expect much in the elucidation of the present card-catalogue.

During the year the work on the old books still uncatalogued has been resumed, and has been confined to the difficult Americana, which had been left over, and which were brought to light as the shelf-arrangement went on. A diminution of the regular catalogue force, by the withdrawal of those who have been given charge of the altering of the shelf-numbers on the cards of the catalogue, as the work of shelf-classification goes on, has reduced the number of cards prepared to 20,595 — a smaller number than has been reported for several years past — and has piled up some arrearage of the Medlicott purchase and Paine bequest, as well as of pamphlet volumes. The labor incident to the rearranging of the books must necessarily interfere with the proper work of the catalogue department for some years to come, but I shall endeavor to prevent the accumulation of large arrearages. Considerable time is also now being spent upon the rectifying of the arrangement of the cards, both in the public and official catalogues. Many years had gone on without such examination, and the misplacements of the cards were productive of evils which it was necessary to cure at once. The number of cards which have been distributed in the Public Catalogue during the year has been 36,390.

JUSTIN WINSOR, *Librarian.*

GORE HALL, Oct. 11, 1879.

To the President of the University: —

Sir, — My last Annual Report concluded with an account of the undertaking, then in progress, to relieve the immediate needs of the Observatory by a subscription of five thousand dollars a year for five years, and with an expression of the hope that this attempt would shortly be successful. I have now the gratification of stating that the subscription was, in fact, soon afterwards completed, and of returning my hearty thanks, on behalf of the Observatory, to the ladies and gentlemen who have so generously supplied its wants.

The improvement, resulting from this subscription, in the condition of the Observatory will appear at once upon the bare statement of what could have been accomplished without such aid. Even when the interest upon the invested funds of the University was much higher than at present, the means of the Observatory permitted very little scientific work to be carried on beyond that done with the Meridian Circle. Indeed, the observations made, even with this instrument, could not be reduced with the desirable promptitude, and the publication of the first observations made in 1871 and 1872 was only partially accomplished in 1877. With the diminished income of recent years, therefore, no more could be hoped for than to keep a single instrument in moderate activity, so that the use either of the Meridian Circle, or else of the Equatorial, would have been restricted to occasional observations. As it is, although the force of computers engaged in reducing the old observations made with the Meridian Circle has been increased, the following pages will show that both instruments have been actively employed. Moreover, a large amount of interesting work with the Equatorial, which was begun in the hope, but without the certainty, that means would be provided for its completion, has been reduced, discussed, and, to a considerable extent, already published. In fact, as had been anticipated, the whole sum raised by subscription has been directly applicable to the scientific work of the Observatory, so that the increase in the amount of this work has been, relatively, much greater than that in the income of the Observatory. A large part of the previous resources of the institution was necessarily consumed in providing for the repairs and the care of the buildings, and in supplying fuel, lights, and stationery. The addition to these expenses resulting from additional work is comparatively slight. Hence, any large observatory, already fully established, can always apply the additional income which it may receive more economically, and with a better prospect of attaining considerable results, than would be possible for a smaller institution of the same kind. The instruments with which an observatory is already equipped are rarely employed as constantly as they might be, if a larger endowment were provided for them, owing to the great labor involved in reducing and publishing the observations made with them; and a single superintendent can direct the work of many computers as efficiently as if their number were much smaller.

The complete list of subscribers to the fund raised for the current work of this Observatory is given below, with the amount promised annually by each for five years. The sums marked with asterisks are donations made for one year only. Conditions have been attached to two or three of the remaining subscriptions; but, even without these, the full sum of five thousand dollars a year for five years has been provided.

LIST OF SUBSCRIBERS.

Name.	Amount.	Name.	Amount.
William Amory	$100	W. C. Cabot	$50
Charles F. Choate	100	James L. Little	100
Alexander Agassiz	100	R. E. Robbins	50
E. C. Pickering	200	Miss Jane Welles	200
J. M. Forbes	100	R. S. Fay	50
Fred. L. Ames	100	Mrs. Anna C. Lodge	50
Nathaniel Thayer	100	F. R. Sears	50
Martin Brimmer	100	Otis Norcross	100
H. H. Hunnewell	100	Charles P. Curtis	100
T. Jefferson Coolidge	100	G. W. Lyman	50
John L. Bremer	100	Mrs. S. Hooper	100
Charles H. Dalton	50	R. C. Winthrop	50
John L. Gardner	100	G. B. Emerson	50
Misses Wigglesworth	100	T. G. Appleton	50*
J. Ingersoll Bowditch	100	Mrs. Shaw	150*
H. A. Whitney	50	W. P. Mason	100*
G. O. Shattuck	50	Theodore Lyman	100*
Mrs. Sparks	60	E. R. Mudge	100
Mrs. J. M. Forbes	200	E. Austin	100*
W. F. Cary	50	W. O. Grover	50
A. C. Wheelwright	50	C. F. Adams	100
Mrs. A. Hemenway	100	George Gardner	50

Name.	Amount.	Name.	Amount.
F. H. Peabody	$50	Charles E. Ware	$50
H. P. Kidder	100	Henry S. Grew	50
Augustus Lowell	50	John P. Bayley	50
O. W. Peabody	125*	James Davis	100
Mrs. Brooks	100*	Mrs. David Sears	100
G. B. Blake	50	P. C. Brooks	100
John C. Gray	100	Charles J. Paine	50
George Higginson	100	Augustus Flagg	100*
James H. Beal	50	John C. Phillips	100
J. M. Sears	100	George P. Upham	50
Samuel R. Payson	50	W. G. Weld	50
Robert W. Hooper	50	J. A. Burnham	100
William D. Pickman	100	Stephen Salisbury	50
F. L. Higginson	50		

During the period covered by this Report, the large equatorial telescope has been used on almost every clear evening, and frequently, also, during the last half of the night. The observations made with it are, in part, published in Volume XI. of the Annals of the Observatory, which will be described below. Among these are photometric measurements of Iapetus, the outer satellite of Saturn, made on one hundred and one nights, in the autumn and winter of 1878–79. Similar observations had been made on twenty nights in the previous year, and the entire series furnishes a determination of the law followed by the satellite in its changes of brightness.

The photometric observations of the eclipses of Jupiter's satellites, described in my Report of last year, have been continued, and form one of the most important pieces of work recently accomplished with the large telescope. The number of these eclipses observed, in addition to those previously reported, is twenty-five, six of them with both East and West Equatorials.

An attempt has been made to furnish means for the comparison of the scales of stellar magnitude, employed by different astronomers in their estimates of the brightness of faint stars. At present, as is well known, the scale of one observer may vary considerably from that to which another has accustomed himself, and it is often difficult to know what degrees of brightness are to be understood to correspond to published estimates of magnitude. In order to do something to remedy this defect, a number of faint stars were selected for photometric observation, and a circular was distributed among astronomers, and published in the Astronomische Nachrichten, the Monthly Notices of the Royal Astronomical Society, Nature, and the Astronomical Register, requesting estimates of magnitude of the same stars, for comparison with each other and with the results of the measurements made here.

The region selected was in the immediate neighborhood of the north pole. The grounds for this choice are that throughout the northern hemisphere the stars may always be referred to for comparison with others, and that their altitude at each station is nearly invariable. The work of measurement undertaken here is complete, and the observations are mostly reduced. It is hoped that during the coming year replies to the circular will be received from many quarters, and especially from those astronomers who are accustomed to make estimates of the magnitude of asteroids.

A series of measurements of all the planetary nebulæ has also been undertaken with the large Equatorial. Their diameters will be measured, and, when they are elliptical, also the directions of their axes. The double-image micrometer, described in the last Report as Photometer M, is used for this purpose. An important test of the character of a nebula is found in its spectrum. The use of a spectroscope, however, is surrounded by difficulties, especially when the object is small and faint. A direct-vision prism has therefore been inserted between the objective and eye-piece, and each nebula examined through it. If monochromatic, the nebula presents the same appearance as if the prism was removed; but if the spectrum is continuous, its light is spread out into a luminous band. A single glance, therefore, serves to distinguish between these appearances, and to place the nebula in its proper class. The loss of light is small, and the telescope need not be pointed with accuracy.

An instrument, designated in our records as Photometer Q, has been constructed for measuring the light of the nebulæ. The comparison is here made with the image of a star thrown out of focus by such an amount that it will appear of the same intrinsic brightness as the nebula. Knowing the stellar magnitude, a simple computation serves to show what must be the magnitude of a star which, when spread over a circle one minute in diameter, would emit the same amount of light as an equal area of the nebula. We may, accordingly, describe the light of the nebulæ in stellar magnitudes, thus adopting the same unit and same scale for nebulæ and stars.

Among other photometric measurements may be mentioned a considerable number made on variable stars, and on others near them, which have been used by former observers as objects of comparison.

A short series of observations for stellar parallax was obtained last summer, and the complementary observations required for comparison with them will be made during the coming year. The stars are observed in zones according to a plan devised by Mr. Searle; a part of the observations have been made by him, and the remainder by Mr. Wendell.

Miscellaneous work has also been done with the telescope. Several asteroids have been observed by Messrs. Rogers and Upton, and a long series of observations of the position of Comet II. 1879 has been made by Mr. Wendell.

Some minor improvements have been made in the large telescope, by which its efficiency is materially increased. The most important of these changes is the addition of new microscopes for setting the telescope in declination.

Observations have been obtained by Professor Rogers with the Meridian Circle on one hundred and seventy-one nights between November 1, 1878, and September 23, 1879. The observation of the zone of eight thousand stars between 50° and 55° north, undertaken by this Observatory as its share in the determination of the position of the stars of the northern hemisphere, was completed on January 26, 1879. It has occupied a large part of the time of the observer, Professor Rogers, for over eight years, and forms one of the largest astronomical undertakings which have been carried to completion in this country. Some years will still be required to complete the reduction and publication of this work.

The observations of the list of two hundred and fifty-eight stars, undertaken at the request, and partially at the expense, of the United States Coast Survey, were completed on January 5, 1879.

During the months of November and December, 1878, a list of ten stars, furnished by Professor David Gill, was observed, for the purpose of ascertaining the personal equation between bright and faint stars, the results of the observations of the Mars comparison stars observed in 1877 requiring an investigation of this kind in order to make them available.

Observations were also made —

(*a*.) To determine the personal equation between bright and faint stars, the reduction in magnitude being made by means of diaphragms of varying diameters.

(*b.*) To determine the personal equation between bright and faint fields of the telescope.

(*c.*) To determine the personal equation between observations made by tapping the chronograph key with the thumb and with the forefinger.

Since February 15, 1879, the Meridian Circle has been devoted to the determination of the absolute co-ordinates of one hundred and eight stars of the first, second, and third magnitudes.

The following outline of the arranged programme of the work will indicate its general character: —

(*a.*) The determination of the right ascension of the sun by means of its declination observed at meridian transit. The observations are distributed as nearly symmetrical as possible about the two equinoxes, and extend over a period of eighty days near the vernal equinox and eighty days near the autumnal equinox.

(*b.*) The determination of the obliquity of the ecliptic by observations near the solstitial points. The observations for this purpose are limited to twenty days in June and twenty days in December.

(*c.*) Ten observations of each star near each equinox. In order to make the observations in right ascension as strictly differential as possible with respect to the sun, the working lists are so arranged that the stars to be observed at a given time shall have nearly the same declination as the sun. The observing list of stars of this class is limited to stars within about 30° of the equator,

(*d.*) Stars north of 30° declination are connected with the primary system by observations extending from May to August.

(*e.*) The instrumental constants depend upon observations of Polaris only. For this purpose this star is observed at each culmination as often as possible. For right ascension, it is observed over a close group of twenty-five wires, which are symmetrical with respect to the equatorial groups. For the determination of the equator-point correction of the circle, twenty separate determinations of the declination are made at each transit, four microscopes being used for each setting of the telescope. The actual number of separate determinations is 2,317. A complete observation of Polaris requires about forty minutes. The time required for an equatorial star is about four minutes.

The number of observations made during the current year is given in the following table: —

Class.	Number of Observations.
Gill's List, &c.	291
Zone Stars	400
Coast Survey Catalogue, 1878–79	636
Fundamental Stars, 1879	1,454
Polaris	130
Sun	98
Total	3,009

It will be noticed that the number of observations of Polaris and of the Sun is comparatively large, since they were contained in a period of a little over six months.

Before beginning the absolute work in 1879, the following changes in the instrument were made: —

(1.) A new transit-reticule was inserted, having groups of five, nine, and five wires. For the polar group, the middle group was still further divided by the insertion of sixteen additional wires, terminating in the centre of the field.

(2.) A new polarizing eye-piece was constructed for solar observations.

(3.) Inasmuch as the micrometer screws furnished with the instrument required quite large corrections, it was deemed economy to substitute new micrometers for them. Accordingly, Mr. George B. Clark, of the firm of Alvan Clark & Sons, made four new ones, which, upon investigation, were found to have no error exceeding 0.05″.

By means of a swinging arm carrying two eye-pieces, the power of each microscope can be nearly doubled at will.

A very large number of observations have been made for the determination of the error of each 15° division of the circle, and provision has been made for the examination of each 5′ space by the construction of a separate arc of 15°, graduated to 5′, which, after the investigation of its errors, will be used as a constant arc of reference.

The present state of the reductions is as follows: —

(1.) Zone Observations. Besides the work described in the Report of last year, the chronograph sheets of the present year have been read, and the observations of the fundamental stars for

1878 have been completely reduced. They rest upon the new Pulkowa system.

(2.) Polar Catalogue, 1872–73. This catalogue is nearly ready for publication, but the discussion of the observations is yet to be made.

(3.) The reduction of Coast Survey Catalogue of 1878 is completed, and the resulting positions have been communicated to the Superintendent of the Survey. This work is also nearly ready for publication.

(4.) General Catalogue, 1874–75. Over two hundred pages of the volume containing these observations are in type, and its issue from the press may be expected within a short time.

(5.) Fundamental Catalogue, 1879. The work of reduction has not proceeded very far, owing to the press of work in other directions. The chronograph sheets have been read off, and the means of the times of transit and of the circle readings have been taken for about one-half of the observations of this series. The general constants required for the reductions have also been computed.

A work of some magnitude has been undertaken during the past year in the determination of the light of all the stars visible to the naked eye in this latitude. For this purpose a catalogue of about four thousand stars has been formed, arranged in the order of right ascension, and brought forward to 1880.0. It includes all the stars in the Uranometria Nova of Argelander, all the stars in the Atlas Coelestis Novus of Heis, and in the Durchmusterung to the sixth magnitude inclusive, and those in Behrmann's Atlas des südlichen gestirnten Himmels north of 30° S. To these have been added a few stars from other authorities.

As most of these stars are inconspicuous objects, much time would be lost in identifying them in the field of a photometer mounted on an ordinary stand. This is avoided by observing them in the meridian as with a transit instrument. The photometer consists of a horizontal telescope pointing to the west, and having two objectives. By means of two prisms mounted in front of the telescope, the pole star is reflected into one object-glass, and the star to be measured into the other. The cones of light are made to coincide by a double-image prism, the extra images being cut off by an eye-stop. The star to be measured is thus seen in the same field with the pole star, with the same aperture and magnifying power. Many of the errors to be apprehended in the use of the Zöllner photometer and other instruments in which the comparison is made with an artificial star are thus eliminated. The most important are those due to the different appearance of the real and artificial stars, the variation of the latter, and the varying opacity of the atmosphere. To determine the relative transparency of the air at different altitudes, a list of a hundred circumpolar stars has been prepared to be observed at both upper and lower culminations. Progressive changes in the light of the pole star may thus, also, be detected and eliminated. This method of observation may evidently be applied to any other form of photometer.

Many practical difficulties were found in the construction of this photometer, and much time was spent in overcoming them and in making the preliminary observations. An assistant is required to set the reflecting prism, read the circles, and keep the record. Two persons can thus measure about forty stars in an hour. Each of the four thousand stars will be observed on three evenings, four settings being made each time. Three observers will take part in the work, to lessen the effect of personal errors.

The meteorological observations have been continued on the system arranged at the beginning of 1877, but it now becomes a question whether this part of the routine labor of the Observatory should be maintained after the close of the present year, which will complete a period of forty years since Professor Bond began observations of this kind in Cambridge. The great number of meteorological stations established in late years, and their superior facilities for performing their work satisfactorily, make the utility of similar work at institutions like this Observatory, where it cannot receive close attention, at least doubtful, from a scientific point of view. There are certain points of connection between meteorology and astronomy which might be usefully investigated here; but this would require special observations of a kind differing considerably from those wanted in the preparation of ordinary meteorological statistics. Again, inquiries with regard to the rainfall and the general character of the weather at particular times are occasionally addressed to the Observatory, and still more rarely the mean temperature is inquired for. These questions might be answered as well as they can be at present without keeping up the present form of meteorological record. By endeavoring to supply only those kinds of information which experience shows to be most frequently in demand, the work might apparently be much simplified, with no loss either to the scientific or to the general public. Unless, therefore, the proposed abandonment of this record should prove to be open to objections which have not yet suggested themselves, it is probable that the full meteorological record hitherto kept up will be discontinued. In any case, it will be desirable to collect and publish the results obtained during the past period of forty years.

The time-service has been conducted in a satisfactory manner during the past year, as heretofore, by Mr. Leonard Waldo, the immediate care of the clocks being intrusted to Mr. Frank Waldo. The signals have been distributed with so small an error that in but three, or possibly four, cases have they differed at 10 A.M. by more than two-tenths of a second from the true time as determined from the standard clock of the Observatory. The time-ball continues its excellent record of the previous year. Since the 1st of January, accidents have caused a small error in its fall on two days only, and on three days it has been dropped at 12h. 5m. 0.0s.

The publication of two new volumes of the Annals of the Observatory was undertaken during the past year. Volume XI. contains the results of over twenty-five thousand photometric observations, principally made with the large Equatorial. The first part of the volume has been completed; the second part is now going through the press, and will be distributed during the coming year. Part I. contains a description of the instruments employed, a journal of the observations, a discussion of the relative light of Jupiter and Venus, Mars and Saturn, and a comparison of the relative light of the components of the principal double stars. These were measured with care, taking various precautions to eliminate systematic error. The light in different parts of the spectra of certain colored stars was also compared, and a discussion given of the effect of the proximity of a bright star. The results are finally compared with the magnitudes estimated by Struve. Part II. of this volume will contain an investigation of the photometers in which the light is measured by a small telescope with variable aperture. All of the known satellites, except the inner satellites of Uranus, have been observed with these instruments. A series of very faint companions to bright stars have also been measured, and the results discussed in this volume. A large part of Volume XII., which contains the observations with the Meridian Circle in 1874–75, is in type, and will be completed during the coming year. The stars to which the work relates are the same as those the places of which are given in Volume X. of the Annals.

A beginning has been made of a series of improvements much needed in the Observatory building. Additional shelves have been put up in the Library, increasing its capacity for books more than one-half. This room and the East Computing Room have been repainted and papered, the furniture re-covered, and the engravings re-framed. New carpets are now needed in these rooms, and the second story of the West Wing should be similarly re-fitted. Both stories are required for the accommodation of the present force of computers. The Prime Vertical Room, which for many years has been used only for holding books not in use, has been partially fitted up for the accurate measurement of short distances.

Extensive repairs have been made during the past year in the shutters of the large dome, and in the machinery for moving them.

The grounds and avenue have been kept in order mainly at the expense of the Director. Various minor improvements have been made in the way of drainage, re-sodding, extracting roots, &c.

The entry of the West Wing of the Observatory is obstructed by the wooden pier of the West Equatorial. This pier is unsteady, and is a source of danger from fire. It is proposed to replace it by two brick walls, connected above and below so that the entry shall pass between them. This will greatly improve the appearance and convenience of the passage, and will increase the steadiness of the telescope.

The Observatory is indebted to Mr. Joseph Coolidge for the gift of a valuable pocket chronometer (Richard 112). It is of a rare and curious construction, and remarkable for the perfection of its workmanship. It will prove a useful addition to the instruments of the Observatory.

EDWARD C. PICKERING, *Director.*

To the President and Fellows of Harvard College:—

Our most important accessions of the year are the magnificent collections of the "Blake" Expedition of 1878–79, and the large collections of Birds, Mammals, Reptiles, and Fishes made by Mr. Garman at St. Kitts, Dominica, Grenada, Trinidad, St. Thomas, and Porto Rico, after he left the "Blake." I may mention, also, our exchanges with the National Museum at Washington, and the purchases made of Professor Henry A. Ward in Birds and Mammals.

Many improvements have been made in the arrangement of the Exhibition Rooms. The galleries of the North American Faunal room, and the gallery containing the Systematic Collection of Crustacea, have been opened to the public. The room containing the Systematic Collection of Fishes and Selachians, having been provisionally arranged by Mr. Garman, is now accessible to the public. Excellent progress has been made in the completion of the new cases in the room devoted to the Systematic Collection of Mollusca, and a large part of the collections intended for exhibition have already been selected by Mr. Hamlin. Much has also been done by Mr. Allen in the selection of material for the Birds and Mammals of the Faunal collections still remaining incomplete.

The exchanges of the Library continue with regularity. To a few correspondents of the Museum, the publications have been distributed by the Smithsonian; the majority, however, have received them direct by mail or through the agency of booksellers.

To Messrs. Lyman, Cabot, and Pourtalès the Museum is indebted for voluntary work and other valuable assistance. To Carlile P. Patterson, the Superintendent of the Coast Survey, the Museum owes the maps accompanying my report of operations on the "Blake."

Beside the distribution of the "Blake" collections among specialists for final investigation, collections from the Entomological, Conchological, and Ornithological Departments have as usual been sent to well-known investigators, for examination. Important material has also been forwarded for study to Dr. W. K. Parker, to Professor Schiödte, and to Mr. F. M. Balfour.

The usual exchanges have been continued with our correspondents; details concerning them will be found in the special Reports of the Assistants of the Museum.

Collections for purposes of instruction have been sent to Bethel College, Kentucky, to the Boston Society of Natural History, and to the Taunton High School.

The number of visitors to the Museum is constantly increasing. This is undoubtedly due to the fact that the Museum is always open, the admission not being limited to appointed days alone. As we can give but a comparatively small exhibit of our Entomological collections, the work-rooms of the Entomological Department are open on special occasions; they have been visited by a number of specialists, and by classes desirous of seeing the Biological collections; Dr. Hagen has made great progress in their arrangement during the past year.

The instruction at the Museum has been in charge of Professors J. D. Whitney, Shaler, Dr. James, Dr. Faxon, Dr. Mark, and Messrs. Davis and Wadsworth. The special students have received the customary facilities for work in the different Laboratories.

The Sturgis-Hooper Professor of Geology, Mr. J. D. Whitney, has devoted the greater part of his time to the publication of the first part of the "Auriferous Gravels of California." Of this he has defrayed the principal cost, in addition to supplying the means, as in former years, not only for many incidental expenses, but also for the additional instruction in Lithology, given in the Department, under his supervision, by Mr. M. E. Wadsworth.

Professor N. S. Shaler has given an elementary course in Geology, consisting of lectures, and laboratory and field work; the course has been attended by eighty-five persons. Also, courses in Palæontology and advanced Geology, attended by seven persons. Professor Shaler has also continued his usual summer course in connection with the Geological Survey of Kentucky.

Mr. Davis has this year taken charge of the elementary course in Physical Geography; this has been attended by forty-five persons. There have been no advanced students in Geology during the past year. The elementary instruction in Zoölogy was given by Dr. Mark; it consisted of lectures, three times a week, and laboratory work. This course was attended by eighteen students.

Dr. William James gave, as in former years, an elementary course of instruction in Vertebrate Anatomy and Physiology, to about ninety students belonging to the three upper classes of undergraduates.

My Laboratory at Newport was as usual opened to certain public teachers and assistants of the Museum. Mr. Faxon obtained there the bulk of the material for his papers on the development of Crustacea.

During the past summer, a number of microscopes and other apparatus have been obtained, to equip a temporary Biological Laboratory for elementary instruction. This course will be in charge of Professor Farlow and of Dr. Faxon.

Some of the classes in Natural History have now become so large that the want of proper accommodations is seriously felt. We cannot hope to remedy this evil until, in accordance with the conditions of the subscriptions to the Agassiz Memorial Fund, the next addition to the Museum is built. That is to be almost wholly devoted to laboratories, lecture-rooms, and work-rooms, and will give us all the necessary facilities for instruction in Biology and Geology.

The publications of the Museum during the past year have been more than usually important. Of the Memoirs, we have issued Part I. of No. 1 of Vol. VI., containing the Auriferous Gravels of the Sierra Nevada, by J. D. Whitney, pp. viii, 288, 10 plates, and a map. This volume has been published in connection with Professor J. D. Whitney and the Geological Survey of California; it contains an elaborate memoir on the presence of human remains in the auriferous gravels of California, with a plate of the celebrated Calaveras skull. Nos. 7 to 15 inclusive of the Bulletin have also been issued and distributed. They contain Preliminary Reports on the Ophiurans of the "Challenger" expedition, by Theodore Lyman; two papers on the Development of Crustacea, by Walter Faxon; and Preliminary Reports of the dredging operations of the United States Coast Survey Steamer "Blake," containing articles on Sounding Apparatus in use on the "Blake," by Lieut.-Commander C. D. Sigsbee; on the Echini, Corals, Crinoids, Ophiurans, Worms, and Hydroids, by Messrs. Agassiz, Pourtalès, Lyman, Ehlers, and S. F. Clarke; also, a paper on the Classification of Rocks, by M. E. Wadsworth, and an account of the Dredging Operations of the "Blake," during the season of 1878–79, by Alexander Agassiz, addressed to Carlile P. Patterson, Superintendent of the Coast Survey; making in all pp. 250, with 32 plates.

In addition to these publications, Dr. Steindachner has continued in the Proceedings of the Vienna Academy his descriptions of new species of Fishes collected by the Thayer Expedition. Professor Alphonse Milne-Edwards has likewise continued to describe and figure the Crustacea of the "Bibb," "Hassler," and "Blake," in his great work on the Crustacea of Mexico; he also published in the "Comptes Rendus" a preliminary account of the remarkable gigantic Isopod discovered in the first "Blake" expedition, to which he has given the name of *Bathyonomus giganteus*.

The first part of the final Report on the Sponges dredged by the "Blake" has been published in Germany by Professor Oscar Schmidt. It forms a beautifully illustrated quarto memoir, 32 pp., 4 plates.

The Museum has also supplied materials for the publication of the new edition of the Catalogue of the Diptera of the United States by Osten-Sacken, issued by the Smithsonian, as well as for Part VIII. of the Revision of the Trichoptera, by R. M'Lachlan. In addition to these publications, numerous papers have been written by the Professors and Assistants of the Museum for other serials than those of the Museum.

During the past winter I was again invited by the Hon. Carlile P. Patterson, Superintendent of the United States Coast and Geodetic Survey, to join the United States Coast Survey Steamer "Blake," Commander J. R. Bartlett, U. S. N., and to take charge of the dredging operations for the season of 1878–79. Three months were spent in exploring the deep-sea Fauna of the eastern part of the Caribbean Sea, along the Windward Islands, from St. Thomas to Trinidad, and the season's work was completed at Barbadoes. Our success was great; for, thanks to the experience gained during a former season, there were none of the delays incidental to new work. The "Blake" was fitted for sea by her former commander, Lieut.-Commander C. D. Sigsbee, and it was my good fortune to find on board the majority of the officers with whom I sailed in the winter of 1877–78. Lieutenant W. O. Sharrer was the executive officer, and I have to thank him and the other officers for their cordial interest and efficient assistance. I was, as usual, accompanied by Mr. Garman. Although we spent but three months in dredging, the collections made are undoubtedly the most important and largest ever made on this coast, and, with those of former expeditions sent out under the auspices of the Coast Survey, make our deep-sea collections but little inferior to those of the "Challenger." We occupied during this season no less than 200 stations, and made over 230 hauls from the 100-fathom line to a depth of 2412 fathoms. For the details of our cruise I would refer to my Preliminary Report to the Superintendent of the Coast Survey, published in the Museum Bulletin (Vol. V. No. 14, Letter No. 3, May, 1879).

The collections have all been assorted into the groups destined for the specialists who are to work them up. The Mollusks have already been sent to Mr. Dall, the Sponges to Professor Oscar Schmidt, who will thus soon finish his monograph on the Sponges of the Gulf of Mexico, of which the first part has been issued. This memoir is to be a complete report on the Sponges collected by the "Blake" expeditions. The Corals, Echini, Alcyonoids, and Ophiurans have been submitted to Messrs. Pourtalès, Lyman, and Agassiz. The Fishes have been sent to Dr. Steindachner, and during the fall the Crustacea, Annelids, and Star-fish will be forwarded to Professors Alph. Milne-Edwards, E. Ehlers, and Perrier, who will incorporate this new material in the monographs they are preparing, based upon the collections of the first "Blake" expedition, already in their hands.

The exploration of the past winter plainly shows that we cannot expect very many novelties from the deeper waters of the Caribbean Sea and Gulf of Mexico; and although undoubtedly much remains to be done within the belt included between the 100 and 350 fathom line, the main characteristics of the deep-water Fauna have most probably been sketched out. It now becomes extremely desirable to follow the course of the Gulf Stream to the north of the Bahamas, and, by running normals from the 100-fathom line to 2500 fathoms off the coast of the United States, to connect this isolated district with the deep-water Fauna proper of the Atlantic. This work, it is hoped, will be accomplished during the coming summer, the Superintendent of the Coast Survey having asked me to join the "Blake" for this purpose on her return from her winter's cruise.

ALEXANDER AGASSIZ.

CAMBRIDGE, September, 1879.

APPENDIX.

I.

BOSTON, MASS., May 24, 1879.

TO THE PRESIDENT AND FELLOWS OF HARVARD UNIVERSITY: —

GENTLEMEN, — As the friend and pastor of Mrs. Mary Tileston, of New York, and at her request, I beg leave to state the conditions under which she has given to the University the sum of forty thousand dollars, a check for which I had the pleasure of placing in the hands of the President this morning.

1. That this sum of $40,000 shall be kept as a separate fund, to be known as "The Thomas Tileston of New York Endowment."

2. That the interest shall be expended in the support of theological and religious instruction in "the Divinity School."

3. That if this sum shall ever be increased by any future donations from those directing their gifts to be added to the Tileston Endowment, to an amount requisite for the full foundation of a professorship (reckoned at $80,000), the title shall be changed to that of "The Thomas Tileston of New York Professorship," and a special chair be created in the Divinity School, to the support of which the interest of the fund shall go.

4. The six daughters of Mrs. Mary Tileston shall unitedly, so long as any of them survive, have the privilege of keeping *one male student*, — who must be of good character and fair promise in any department of the University, — free of the usual charges of tuition, although subject to all the other rules of entrance and residence. When the student is in any department other than the Divinity School, the fee due that department shall be charged to the Tileston Endowment.

It is the wish of Mrs. Tileston to leave the use of this trust as little embarrassed by specific directions as possible. The interest may be added to the principal instead of being expended annually, if the increase of the sum to an amount equal to the full support of a professorship seems important to the trustees.

Mrs. Tileston's object in this gift is to perpetuate the name and memory of her honored husband, by connecting it with a religious and educational purpose in a university which she believes has the interests of truth, freedom, and piety equally at heart.

As her adviser and representative in this matter, I have the honor to subscribe myself,

Your friend and servant,
(Signed) HENRY W. BELLOWS,
Minister of the First Congregational (Unitarian) Church in New York, and Graduate of 1832.

II.

USE OF THE LIBRARY BY PERSONS NOT CONNECTED WITH THE UNIVERSITY.

THE Library Council, with the approval of the Corporation, have established the following rules for the use of the Library by persons not members of the University: —

I. That all persons be allowed the use of the Library within the building, at the discretion of the Librarian.

II. That graduates of the University have the full use of the Library on payment of five dollars annually, and other persons on the same terms, who shall have presented to the Librarian a written statement indorsed by some officer of the University, of their reasons for wishing this privilege, and thereupon have received the approbation of the Council.

III. That any person who is known to be pursuing systematic investigations in any department of knowledge may be allowed the full use of the Library for a period not exceeding three months, without fee, and at the discretion of the Librarian; and any person by express vote of the Corporation.

IV. That officers of the University be considered entitled to the first use of books, and that preference be accorded them by the Librarian, who shall also, at their request, recall any books that may have been loaned to other persons using the Library.

V. That these rules go into effect forthwith, except in the case of persons who at present enjoy the gratuitous use of the Library, and that notice be given that such use will terminate with August, 1879.

⁂ Blanks for making application for use of the Library may be had at the delivery desk in the Library. Such application should be addressed to the Librarian, and a reply will be returned.

III.

EXTRACT FROM THE WILL OF ANNE E. P. SEVER,

Dated January 22, 1877.

"I give to the President and Fellows of Harvard College the sum of one hundred thousand dollars ($100,000), to be applied and expended by said corporation in the erection of a dormitory or other building for the use of the undergraduates of the University at Cambridge, to be called Sever Hall in memory of my late husband, and I give to said corporation the further sum of twenty thousand dollars ($20,000), to be applied in the purchase of books for its library; and the further sum of twenty thousand dollars ($20,000) for the general funds of the corporation, without restriction as to its use."

IV.

EXTRACT FROM THE WILL OF GEORGE BEMIS, OF NEWTON,

Dated October 23, 1872.

"8. I devise and bequeath to the President and Fellows of Harvard College the sum of fifty (50) thousand dollars, subject to the life use of my sister Sarah, as hereinbefore specifically set apart: said legacy to become absolute in case of my sister's death before my own. To have and to hold to said President and Fellows and their successors in office in trust for the establishment and maintenance of a Professorship of Public or International Law in the Dane Law School of said University. I have no restriction or conditions to lay upon the corporation in regard to the organization and management of such professorship, other than that I desire that it may always be filled by some able and upright publicist and jurist, who shall bring to the office a competent fitness for that special department of study and practice, and of sufficient ability to discuss the current questions of national interest connected with it in such a way as to instruct and aid the popular and professional understanding of them. In that sense I should desire him to be not merely a professor of the science, but a practical co-operator in the work of advancing knowledge and good-will among nations and governments. For that object I should prefer, if practicable, that the incumbent should have had some official connection with public or diplomatic life, or at least have had an opportunity, by foreign travel or residence, to look at the United States from a foreign point of view, and so to estimate it as only one of the family of nations.

"I will add that I make this bequest to my Alma Mater largely through the impulse of gratitude for her valued teachings, but more especially for the instruction which I derived from the legal department of her schools through the lips of the late Judge Story, whose memory I cherish as one the best of guides to study whom I have ever had the good fortune to meet, and whose friendly stimulus to exertion I shall always gratefully remember.

"I may also add the expression of my hope that this bequest will in some degree aid the promotion of the science of public law in the United States, particularly on the part of my brother lawyers, who I have thought have been hardly alert enough in coming to the aid of the National Government on the great questions of belligerent and neutral rights which have of late years so much exercised our country and England.

"May it be the continuing pre-eminence of my country to know and practise a just and Christian neutrality, while other nations are cultivating the arts and prerogatives of war."

V.

SUMMARY OF STUDENTS IN THE UNIVERSITY AT THE BEGINNING OF THE ACADEMIC YEAR 1878-79.

College,		
Seniors	200	
Juniors	174	
Sophomores	218	
Freshmen	227	
		819
Unmatriculated Students		15
Lawrence Scientific School		17
Bussey Institution		4
Dental School		13
Medical School		238
Law School		160
Divinity School		23
Candidates for the Degrees of A.M., Ph.D., and S.D.		37
Holders of Fellowships		7
Resident Graduates not Candidates for Degrees		6
		1339
Deduct for names inserted more than once		7
		1332

Persons who attended the Summer Courses in Science in 1879.

Chemistry	28	
Botany	35	
Geology	7	
		70
Deduct for names inserted more than once		6
		64

Number of Certificates issued to Women in 1879.

Preliminary Examination	8
Advanced Examination	2

VI.

ACADEMIC HONORS FOR THE YEAR 1878–79.

COMMENCEMENT, JUNE 25, 1879.

Frank Lindsay Crawford,	An Oration.
Edward Hale,	Do.
Francis Joseph Swayze,	Do.
Frank Bartlett Patten,	A Dissertation.
William Badger Lawrence,	Do.
Albert Poor,	Do.
Ralph Waterbury Ellis,	Do.
George Faunce,	Do.
John Alden Thayer,	Do.
William De Witt Hyde,	Do.
Clement Walker Andrews,	Do.
William Bancroft Hill,	Do.
William Warren Case,	Do.
Wallace Macfarlane,	Do.
Robert Parker Clapp,	A Disquisition.
Edmund Lincoln Baylies,	Do.
Abram Duane Hopkins,	Do.
Glendower Evans,	Do.
George Ashton Black,	Do.
Francis Almy,	Do.
John Whitney Dalzell,	Do.
Harry Butler,	Do.
Henry Edgar Madden,	Do.
Willard Everett Smith,	Do.
William Henry Sylvester,	Do.
Prescott Keyes,	Do.
Frank Leslie Porter,	Do.
Arthur Anderson Brooks,	Do.
Herbert William Newhall,	Do.
George Henry Burrill,	Do.
William Schofield,	Do.
Edward Herbert Atherton,	Do.
Frank Brewster,	Do.
Frank William Taussig,	An Essay.

HONORS AT GRADUATION.

1879.

In Classics.

Herbert Morison Clarke, A.B.,	Highest Honors.
Edward Hale,	Do.
Arthur Anderson Brooks,	Honors.
Samuel Delano,	Do.
Ernest Jackson, A.B.,	Do.
Webster Kelley,	Do.
Frank Bartlett Patten,	Do.
Edward Emerson Phillips, A.B.,	Do.

In Philosophy.

William Warren Case,	Honors.
William Bancroft Hill,	Do.
Frank Leslie Porter,	Do.

In History.

Wallace Macfarlane,	Highest Honors.
Francis Joseph Swayze,	Do.
Frank William Taussig,	Do.
George Hoadly,	Honors.
William Schofield,	Do.

In Chemistry.

Clement Walker Andrews,	Honors.

In Music.

Richard Heard,	Highest Honors.

SECOND-YEAR HONORS.

In Classics.

William King Richardson,	Junior,	Highest Honors.
Farley Brewer Goddard,	Sophomore,	Highest Honors.
James Robbins Howe,	Do.	Do.
Edwin Cull Howell,	Do.	Do.
Arthur Orcutt Jameson,	Do.	Do.
William Coolidge Lane,	Do.	Do.
James Bettner Ludlow,	Do.	Do.
Harry Leverett Nelson,	Do.	Do.
Arthur Wellington Roberts,	Do.	Do.
Henry Edwards Scott,	Do.	Do.
Henry Baily,	Senior,	Honors.
Edward Lovell Houghton,	Do.	Do.

Frank Milton Gilley,	Junior,	Honors.
Charles Dudley March,	Do.	Do.
Walter Horton Rhett,	Do.	Do.
William George Taylor,	Do.	Do.
Edward Winslow Brewer,	Sophomore,	Honors.
William Henry Coolidge,	Do.	Do.
George Washington Dickerman,	Do.	Do.
Richard Edwards,	Do.	Do.
Henry Olmstead Jones,	Do.	Do.
John Edward Maude,	Do.	Do.
John William O'Callaghan,	Do.	Do.
Chester Allyn Reed,	Do.	Do.
Isaac Lothrop Rogers,	Do.	Do.
John Carew Rolfe,	Do.	Do.
Joel Herbert Seaverns,	Do.	Do.
Irving Gardiner Stanton,	Do.	Do.
George Allen Staples,	Do.	Do.
Edmund Allen Whitman,	Do.	Do.
Benjamin Fosdick Harding,	Unmatriculated Student,	Honors.

In Mathematics.

Warren Norton Goddard,	Senior,	Highest Honors.
Frederic Joaquim Barbosa Cordeiro,	Sophomore,	Highest Honors.
Edwin Cull Howell,	Do.	Do.
Joseph Elwyn Maxfield,	Do.	Do.
Charles Bingham Penrose,	Do.	Do.
Herman Ivah Thomsen,	Do.	Do.

VII.

PRIZES.

DETURS.

THE following students received books, called "Deturs," from the foundation of Edward Hopkins, for excellence in scholarship: —

Sophomores of 1878-79.

Eugene Yancey Cohen,
Alfred Jaretzky,
John Edward Maude,
Herman Ivah Thomsen.

Freshmen of 1878-79.

Alfred Marston Allen,
Joseph Henry Beale,
Charles Wesley Birtwell,
Charles Hallam Keep,
George Lyman Kittredge,
Albert French Lane,

Richards Merry Bradley,
Frank Nelson Cole,
Frank Gaylord Cook,
Franklin Arthur Dakin,
William Harrison Dunbar,
Frederick Atherton Fernald,
William Boyd Fiske,
Homer Gage,
Joseph Peabody Gardner,
Asaph Hall,
Albert Andrew Howard,
Clinton Hill Lord,
Arthur Prescott Lothrop,
John Whiting Mason,
Charles Andrews Mitchell,
Ivan Panin,
William Lowell Putnam,
Charles Moen Rice,
Lucien Moore Robinson,
Roland Thaxter,
Russell Whitman,
Joseph Ruggles Worcester.

Bowdoin Prizes.

Eugene Miley Wambaugh, of the Class of 1876,
Arthur Anderson Brooks, of the Class of 1879,
William Warren Case, of the Class of 1879,
Frank Bartlett Patten, of the Class of 1879,
Arthur Hale, of the Class of 1880,
Walter Allen Smith, of the Class of 1880.

Boylston Prizes for Elocution.

First Prize.

Josiah Quincy, of the Class of 1880.

Second Prizes.

Robert Roberts Bishop, of the Class of 1880,
William Andrews Pew, of the Class of 1880,
Wesley Frank Price, of the Class of 1880.

Lee Prizes for Reading.

Sophomores.

Charles Townsend Copeland,
Clinton Hill Lord,
Frederick Atherton Fernald,
George Christie Van Benthuysen,
Charles Harvey Holman,
Samuel Williston.

Freshmen.

Augustus Mendon Lord, from the Roxbury Latin School,
Charles Sumner Hamlin, from the Roxbury Latin School,
Joseph Randolph Coolidge, from Chauncy Hall School,
Howard Lilienthal, from Fairview Institute,
William Hussey Page, from the Boston Latin School.

VIII.

DEGREES.

Bachelors of Arts of the Class of 1879	189
Bachelors of Arts of Former Classes	4
Bachelors of Divinity	3
Bachelors of Laws	11
Bachelors of Laws of Former Classes	2
Doctors of Medicine	70
Doctors of Dental Medicine	5
Bachelors of Science	2
Bachelor of Agricultural Science	1
Doctor of Science	1
Doctors of Philosophy	2
Masters of Arts	9
Master of Arts of a Former Class	1

HONORARY DEGREES.

Masters of Arts.

Professor Asaph Hall, of Washington, D.C.
Rev. Joseph Henry Allen, of Cambridge.

Doctors of Dental Medicine.

Professor Luther Dimmick Shepard, of Harvard University.
Professor Nathaniel Ware Hawes, of Harvard University.

Doctor of Divinity.

Rev. Edward Everett Hale, of Boston.

Doctors of Laws.

Professor Francis Bowen, of Harvard University.
Professor Joseph Lovering, of Harvard University.
Professor Henry Warren Torrey, of Harvard University.
Sir Edward Thornton, British Minister at Washington.
Thomas Talbot, Governor of Massachusetts.

IX.

COMMITTEES OF THE OVERSEERS, FOR 1879.

To visit the University.

President of the Board of Overseers.
His Excellency the Governor.
His Honor the Lieutenant-Governor.
The President of the Senate.
The Speaker of the House of Representatives.
The Secretary of the Board of Education.
The Secretary of the Board of Overseers.
The Chairman of each of the Visiting Committees.

To visit the Academical Department.

J. Elli[illegible] Cabot.
Charles Francis Adams.
Alexander McKenzie.
Edward E. Hale.
Theodore Lyman.
LeBaron Russell.
Francis G. Peabody.
Robert D. Smith.
Edwin P. Seaver.
John Fiske.
Ralph W. Emerson.
Henry Lee.
Henry James.
George B. Chase.
Charles C. Perkins.
Thomas Wentworth Higginson.
S. Lothrop Thorndike.
John S. Dwight.
Oliver F. Wadsworth.
John Noble.
Richard T. Sprague.
Roger Wolcott.
J. B. Upham.
J. Lewis Stackpole.
James H. Means.
Arthur Dexter.
Joseph B. Warner.
William B. Swett.
George P. Bradford.
John T. G. Nichols.
Henry W. Foote.
William R. Ware.
Henry Wheatland.
David F. Lincoln.
William J. Rolfe.
Christopher P. Cranch.
Daniel B. Hagar.
Samuel M. Quincy.
Edward G. Porter.
Waldo Higginson.
Thomas Davidson.
William F. Apthorp.
Nathan H. Dole.
John O. Means.
Edwards A. Park.
Francis Blake, Jun.
James C. Davis.
William P. P. Longfellow.
William Watson.
Robert Amory.
Russell Gray.
George L. Osgood.
George V. Leverett.
Charles O. Foster.
Charles A. Cummings.
Prentiss Cummings.
Walter C. Cabot.
Edward T. Williams.
Charles P. Curtis.
Abbott Lawrence.
Frank B. Sanborn.
Richard M. Hodges.
Henry Cabot Lodge.

To visit the Divinity School.

Francis G. Peabody.
James Freeman Clarke.
Phillips Brooks.
Edward E. Hale.
Alexander McKenzie.
Henry W. Bellows.
Edward H. Hall.
Adams Ayer.
Artemas B. Muzzey.
Franklin Johnson.
Waldo Higginson.
Henry W. Foote.
Charles F. Dole.

To visit the Law School.

John Lowell.
Leverett Saltonstall.
George O. Shattuck.
Oliver Wendell Holmes, Jun.
William G. Russell.
Darwin E. Ware.
E. Rockwood Hoar.
William C. Endicott.
Robert D. Smith.
Moorfield Storey.
Francis E. Parker.

To visit the Lawrence Scientific School, the Bussey Institution, the Peabody Museum of American Archæology and Ethnology, and the Museum of Comparative Zoölogy.

Theodore Lyman.
Charles R. Codman.
Morrill Wyman.
Richard M. Hodges.
Stephen Salisbury.
Edwin P. Seaver.
Benjamin S. Rotch.
Robert W. Hooper.
Gustavus Hay.
James Lawrence.
Channing Whitaker.
Charles O. Thompson.
T. Jefferson Coolidge.

To visit the Medical School and the Dental School.

LeBaron Russell.
Samuel A. Green.
Morrill Wyman.
Joseph Sargent.
Frederic Winsor.
John G. Park.
Richard M. Hodges.
George C. Shattuck.
Hall Curtis.
James L. Little.
Samuel L. Abbott.

To visit the Observatory.

James F. Clarke.
Charles Francis Adams.
William Amory.
Charles R. Codman.
Amos A. Lawrence.
Henry W. Bellows.
Henry A. Whitney.
Francis H. Peabody.
J. Ingersoll Bowditch.
George I. Alden.
Robert Treat Paine.
J. Randolph Coolidge.
Robert C. Winthrop.
Charles F. Choate.
Alvan Clark.
Frederic O. Prince.
Augustus Lowell.
John C. Palfrey.

To visit the Library.

Phillips Brooks.
E. Rockwood Hoar.
Samuel A. Green.
John Fiske.
Oliver W. Holmes, Jun.
William W. Greenough.
Charles A. Cutter.
George W. Wales.
Samuel F. Haven.
Charles C. Smith.
Samuel S. Green.
Stephen Salisbury, Jun.
Ralph Waldo Emerson.
Samuel Eliot.
Delano A. Goddard.
Francis V. Balch.
Henry G. Denny.
Charles Deane.
Henry F. Jenks.
James T. Fields.
Mellen Chamberlain.
George Dexter.
John M. Brown.

On Treasurer's Accounts.

Leverett Saltonstall.
John Lowell.
Amos A. Lawrence.
Charles H. Parker.
Israel M. Spelman.
Henry Lee.
Nathaniel Silsbee.
George B. Chase.

On Elections.

Henry W. Paine.
Moorfield Storey.
George O. Shattuck.
John Lowell.
William C. Endicott.

On Reports and Resolutions.

William G. Russell.
William C. Endicott.
Henry W. Paine.
Robert D. Smith.
William Amory.
Darwin E. Ware.
Samuel A. Green.

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HARVARD COLLEGE.

TREASURER'S STATEMENT.

1879.

TREASURER'S STATEMENT.

To the Board of Overseers of Harvard College:—

The Treasurer of the College submits the Annual Statement of the financial affairs of the University, for the year ending August 31, 1879, in the usual form.

During the year, $15,450 of United States six per cent bonds, belonging to the Gray Fund for Engravings, have been exchanged for $15,000 of United States five per cent bonds, the difference in value, which was less than the accrued interest on the "called bonds," being treated as income of the Gray Fund. All other changes in the investments of the College are accounted for by the sales and purchases hereinafter stated in detail.

The Funds separately invested are as follows: —

	Principal.	Income.
UNIVERSITY.		
Graduates' Scholarship (part of),		
$20,000, Providence City Bonds, sold during the year,		$752.78
Leonard Jarvis Fund (part of),		
Real Estate in Baltimore, ...	$11,800.00	665.00
COLLEGE.		
Bowditch Scholarships (part of),		
$70,000, Massachusetts 5% Bonds, ...	70,000.00	3,500.00
Shattuck Scholarships (part of),		
20 shares Cocheco Manufacturing Co. Stock, . .	6,512.50	600.00
Bassett Scholarships (part of),		
Mortgage, ...	5,000.00	275.00
Pennoyer Scholarships (part of),		
Pennoyer Annuity in England, ...	4,444.44	280.36
Rumford Professorship (part of),		
French Rentes, ...	10,000.00	586.51
Amounts carried forward, . . .	$107,756.94	$6,659.65

Amounts brought forward, ...	$107,756.94	$6,659.65
Jonathan Phillips Fund,		
Mortgage, ...	10,000.00	550.00
Daniel H. Peirce Fund (part of),		
Mortgage, ...	12,375.62	742.54
Samuel Ward's Gift,		
Ward's (Bumkin) Island, Boston Harbor, . . .	1,200.00	50.00
Botanic Garden Fund (part of),		
$17,000 New York Central R. R. Bonds, ...	17,000.00	1,020.00
Herbarium Fund (part of),		
$12,000, Ionia & Lansing R. R. Bonds, ...	11,520.00	960.00

LIBRARY.

Charles Minot Fund (part of),		
$60,000, Buffalo, Bradford, & Pittsb., R. R. Bonds,	60,000.00	4,200.00
Ichabod Tucker Fund (part of),		
Policy of Mass. Hospital Life Insurance Co., . .	5,000.00	212.50
Charles Sumner Fund (part of),		
36 shares St. Paul & Duluth R. R. Stock, . . .	1,200.00	none.
1 share New England Glass Co. Stock, . . .	325.00	none.

MEDICAL SCHOOL.

George C. Shattuck Fund (part of),		
7 shares Stark Mills Co. Stock, ...	7,000.00	490.00

DIVINITY SCHOOL.

Adams Ayer Fund,		
$1,000, European & North American R. R. Bond,	1,000.00	none.

SCIENTIFIC SCHOOL.

James Lawrence Fund,		
$50,000, United States 6% Bonds, ...	50,000.00	3,000.00
John B. Barringer Fund (part of),		
40 shares Schenectady Bank Stock, ...	2,200.00	200.00

MUSEUM OF COMPARATIVE ZOÖLOGY.

Gray Fund for Museum,		
Mortgage, ...	50,000.00	2,750.00
Sturgis Hooper Fund (part of),		
$20,000, Erie Basin Dock and Warehouse Bonds,	20,000.00	none.
Agassiz Memorial Fund (part of),		
$10,000, Summit Branch R. R. Bonds, ...	10,000.00	700.00
Chicago Debt Certificate, paid during the year,		108.16
Personal note (endorsed), ...	8,000.00	200.00

OBSERVATORY.

Anonymous gift (now used to pay annuities),		
$1,000, Michigan South'n & No. Indiana R.R. Bond,	1,000.00	70.00
$2,000, Cincinnati Municipal Bonds, ...	2,000.00	140.00
$2,000 Minneapolis Municipal Bonds, ...	2,000.00	160.00
50 shares Pittsburg, Fort Wayne, & Chicago, R. R. Stock, ...	5,000.00	350.00
Amounts carried forward,	$384,577.56	$22,562.85

Amounts brought forward, . .	$384,577.56	$22,562.85
SPECIAL FUNDS.		
Bussey Trust,		
Real Estate, ...	413,092.80	17,126.69
Gray Fund for Engravings (part of),		
$15,000, United States 5% Bonds, ...	15,000.00	782.40
Sever Hall Building Fund,		
Manufacturing Co.'s notes, ...	75,000.00	2,480.21
	$887,670.36	$42,952.15

The other Funds of the College are invested as a whole. These investments, with the income thereof, are as follows:

Investments.	Principal, September 1, 1878.	Principal, August 31, 1879.	Income.
Notes, Mortgages, &c., ...	$734,634.03	$955,603.74	$51,384.17
Railroad Bonds, ...	338,760.00	432,704.86	22,612.82
Railroad Stock, ...	75,719.37	43,690.22	5,247.00
United States 6% Bonds, ...	136,624.42		825.00
United States 5% Bonds, ...		190,781.25	
Massachusetts "	49,950.00		1,964.45
Municipal "	75,440.00		3,396.01
New Boston Coal Mining Co. Bonds,	9,000.00	9,000.00	350.00
District of Columbia Bonds, ...			1,681.50
Bank Stock, ...	63,964.00	63,964.00	4,303.10
Manufacturing Stock, ...	99,658.29	99,658.29	8,020.00
Real Estate, ...	902,511.30	904,011.30	56,078.56
Unoccupied Lands, ...	106,887.49	106,887.49	
Brattle Street Reversion, ...	1,000.00	1,000.00	
Advances to Scientific School, . . .	8,288.69	8,585.66	497.32
" " Dental School, ...	16,564.84	16,376.80	993.89
" " Bussey Trust, ...	40,082.13	39,726.13	2,392.93
" " Observatory, ...	749.67		
" " Dining Hall Association,	41,900.91	40,232.16	2,514.05
" " Scudder's Catalogue, .		1,392.28	
" for altering Appleton Chapel,	2,859.62	2,859.62	
" " repairing College Wharf,	1,438.43	1,119.12	100.69
Term Bills not collected August 31, .	68,387.30	76,801.67	
Baring Brothers & Co., ...	1,678.59	5,134.73	
Cash in Suffolk National Bank, .	4,415.82	7,621.52	
Cash in hands of Bursar, ...	3,353.61	7,360.53	
Totals of general investments,	2,783,868.51	3,014,511.37	162,361.49
Totals of special investments,	831,670.36	887,670.36	42,952.15
Amounts, . . .	$3,615,538.87	$3,902.181.73	$205,313.64

The net income of these general investments ($162,361.49) has been divided at the rate of $5\frac{68}{100}$ per cent among the Funds which they represent. The balance of $247.14 has been placed to the credit of the University account.

The rate of income this year as compared with that for 1877–78 shows a falling off of only $\frac{18}{100}$ of one per cent. The very low rates for money throughout the financial year were in part offset by the receipt within the year of more than a year's interest on part of the money of which the investment was changed. If the improvement in general business and in the demand for money, which has already begun, shall continue, the rate of income from the "general investments" for 1879–80 is not likely to fall below five and one half per cent, unless a fire or other disaster should occur to reduce the income from the real estate.

The following table shows the income available for the departments dependent upon the College proper, and the expenditures in those departments: —

Interest on funds for		
University Salaries and Expenses,	$21,647.81	
College Expenses,	1,789.20	
Library,	1,042.80	
College Salaries,	29,879.11	
Gymnasium, and repairs on College buildings,	none.	
Cash received from undergraduates,	159,634.35	
Sundry cash receipts,	4,083.50	
		218,076.77
Expended for		
University Salaries and Expenses,	$29,749.81	
College Expenses,	30,160.73	
Library Salaries and Expenses (not books),	20,607.64	
Gymnasium Salaries and Expenses,	2,186.66	
College Salaries,	129,090.64	
Repairs and insurance on College Buildings not valued on Treasurer's books,	5,572.30	
		217,367.78
Balance showing surplus for the year, which has been carried to Stock Account, to repay in part last year's deficit,		$708.99

In the University, College, and Library accounts an increase of income, chiefly from College tuition fees and the interest on new Funds, and a reduction of expenses, chiefly in the Library, have left a surplus of $708.99, which has been used to repay in part last year's deficit. The large apparent reduction in both the income and expenditure of the University account is due to a change in the form of stating the account of advances for the extension of the Library building. During the year 1879–80 the large increase of expenditure for the service of the new Gymnasium and the loss of income from room-rents of students will cause a deficit in the College account which cannot be overcome, unless some new sources of unrestricted income shall offer themselves.

In the Divinity School loss of income from the Bussey Trust has left a deficit of $2,351.84, in spite of a considerable reduction in expenses. For 1877–78 there was a deficit of $3857.19.

In the Law School loss of income from the Bussey Trust and a large falling off in the fees from students have left a deficit of $4,557.01, in spite of some reduction of expenditure. In 1877–78 there was a surplus of $1,266.74.

The Medical School has made a surplus of $16,763.29, chiefly from increase in the fees from students. Of this this amount, however, the sum of $7223.22 is due to a change made in the form of account, by which all term-bills issued for the year are credited to the School, whether paid within the year or not. Hereafter the receipts reported from tuition fees will correspond with the number of students in the School during the year, and not with the bills actually paid within the year as heretofore. This change makes the Medical School account conform to those of the other departments of the University, and to it is due the large increase in the item of advances for unpaid term bills. In 1877–78 the surplus of the Medical School was $3,603.61.

In the Dental School, a great reduction of expenses, chiefly in salaries, has made a surplus $188.04, which has gone to reduce the debt of the School. In 1877–78 there was a deficit of $2,245.24.

In the Lawrence Scientific School a large falling off of income, chiefly in fees from students, has left a deficit of $296.97, in spite of reduction of expenses. In 1877–78 there was a surplus of $931.63. Mr. Alexander Agassiz has during the year advanced to the Agassiz Building Fund the sum of $8000, which sum, together with the greater part of the Fund itself, has been expended under his supervision in the large addition to the Museum building.

In the Observatory the new subscriptions for current use have allowed an increased expenditure for salaries, and left a balance of $7,490.92, after repayment of last year's deficit.

This balance is mostly due to the payment in advance of subscriptions for the current expenses of the next four years. In 1877–78 there was a deficit of $749.67.

In the Bussey Institution the salaries have been paid in full, and but little reduction has been made in expenses. The continued and further loss of income from the Bussey Trust has made it necessary to balance the year's account by taking the sum of $7448.80 from the principal of the Bussey Building Fund, but this unrestricted Fund is now reduced to a sum too small to allow the continuance for another year of the present rate of expenditure at the Institution. In 1877–78 the deficit of the Bussey Institution was $3,615.73.

The net income from the Bussey Trust has again fallen off, partly owing to the expiration during the year of a valuable old lease, and partly from unusual expenditures for insurance and repairs. The repairs made this year include improvements which were necessary to make the stores attractive to good tenants. The Bussey stores are now as fully occupied by good tenants as they were five years ago, but the rents are very low; in fact, much lower than is indicated by the gross rental of the past year. Most of the property is let for short terms, and any improvement in the rental value of such stores can be quickly taken advantage of. It should be remembered that, while all loss of rent falls wholly upon the surplus income to be divided between the Bussey Institution and the Divinity and Law Schools, any improvement in rental value will again rapidly increase that surplus. The fixed charges for annuities and interest amount to a large sum, and the surplus income therefore loses or gains much more, proportionally, than the gross rental. An increase of thirty per cent in the gross rental of the past year would have increased the surplus one hundred per cent.

Gifts have been received during the year as follows:—

TO FORM NEW FUNDS OR INCREASE OLD ONES.

From the executors of Mrs. Anne E. P. Sever $100,000 for Sever Hall; $20,000, "to be applied in the purchase of books for the Library"; $20,000, "for the general funds of the Corporation without restriction as to its use."

From Edward Russell, Esq., $100, to increase the scholarship founded by him.

From the administrators of Quincy Tufts, under a decree of the Supreme Judicial Court, $2000, to establish "a permanent fund of which the income is to be used for the benefit of the Medical School."

From the executors of George Bemis, for a Professorship of International Law, $50,000 subject to an annuity.

Through the Rev. Dr. Bellows, $40,000, for the further endowment of the Divinity School, from Mrs. Mary Tileston of New York.

Subscriptions for the further endowment of the Divinity School, paid to Sept. 1, $38,030.25, as by list following: —

A friend	$50.
"	15.
" through H. P. Kidder	200.
" " A. T. Lyman	50.
" " Rev. E. E. Hale	1,000.
Abbot, Ezra	100.
Appleton, T. G.	1,000.
Atkinson, Mrs. Mary C.	30.25
Austin, Edward	500.
Bemis, Seth	250.
Billings, Robert C.	500.
Blake, Arthur W.	100.
Blake, George Baty	500.
Bowditch, Mrs. E. B.	1,000.
Bowditch, J. Ingersoll	200.
Brooks, Peter C.	1,000.
Cary, William F.	500.
Clarke, John J.	100.
Coolidge, J. Randolph	100.
Cory, Barney	200.
Eliot, Charles W.	100.
Eliot, Rev. William G.	100.
Endicott, William, Jr.	500.
Everett, Charles C.	100.
Farwell, Mrs. Susan W.	50.
Faulkner, Charles	500.
First Religious Society in Roxbury	120.
Gannett, W. C.	25.
Gardner, John L.	1,000.
Guild, James	100.
Higginson, George	1,000.
Higginson, Waldo	200.
Hunnewell, H. H.	1,000.
Kidder, H. P.	10,000.
Learned, John C.	$100.
Lee, Henry	300.
Lodge, Mrs. Anna C.	100.
Lowell, Miss Anna C.	500.
Ludden, J. D.	50.
Lyman, Arthur T.	500.
Lyman, Arthur T., through	5,000.
May, Miss Abby W.	50.
May, Mrs. Samuel	50.
Merriam, Mrs. Caroline	500.
Norcross, Otis	500.
Parker, Francis E.	100.
Peabody, S. E.	100.
Pickman, W. D.	500.
Quimby, Rev. J. W.	50.
Richardson, George C.	500.
Richmond, Mrs. Abby Crocker	1,000.
Salisbury, Stephen	200.
Sawyer, Edward	25.
Shippen, Joseph	15.
Sweetser, Mrs. Isaac	100.
Tower, William A.	50.
Wales, Miss Mary Anne	200.
Ware, Dr. Charles E.	500.
Ware, Mrs. Charles E.	500.
Warren, George	1,000.
Waterston, R. C., Estate of	1,000.
Weld, William F.	500.
Wheelwright, Edward	100.
Wheelwright, J. W.	50.
Wheelwright, Josiah	100.
Wigglesworth, Miss Mary	500.
Williams, Moses	1,000.
Young, Edward J.	100.
	$38,030.25

From George Baty Blake, Esq., $1000, for a Pension system.

From the estate of Thomas Connell of New York, $408.95, for the Fire Relief Fund; in full for dividend on his bequest of $5000.

GIFTS FOR IMMEDIATE USE.

Subscriptions for Chinese Instruction, paid to Sept. 1, from

Quincy A. Shaw, $500. A. A. Low, $500.

Subscriptions for Mr. Ford's salary, paid to Sept. 1, from

W. C. Cabot, $50. Charles J. Paine, $50. F. R. Sears, Jr., $50.

Subscriptions for the Observatory, paid to Sept. 1, from

Adams, Charles Francis	$100	Hunnewell, H. H.	$100
Agassiz, Alexander	500	Kidder, H. P.	500
Ames, Fred. L.	100	Little, James L.	500
Amory, William	100	Lodge, Mrs. Anna C.	50
Bayley, John P.	250	Lowell, Augustus	50
Beal, James H.	50	Lyman, G. W.	250
Blake, G. B.	250	Lyman, Theodore	100
Bowditch, J. I.	100	Mason, W. P.	100
Bremer, John L.	100	Mudge, E. R.	100
Brimmer, Martin	100	Norcross, Otis	100
Brooks, Mrs.	100	Paine, Charles J.	50
Brooks, Peter C.	500	Payson, Samuel R.	50
Burnham, J. A.	500	Peabody, F. H.	250
Cabot, W. C.	50	Peabody, O. W.	125
Cary, W. F.	250	Pickering, E. C.	200
Choate, Charles F.	100	Pickman, William D.	100
Coolidge, T. Jefferson	100	Phillips, John C.	100
Curtis, Charles P.	100	Robbins, R. E.	50
Dalton, Charles H.	50	Salisbury, Stephen	250
Davis, James	100	Sears, Mrs. David	100
Emerson, G. B.	50	Sears, F. R.	50
Fay, R. S.	50	Sears, J. M.	500
Flagg, Augustus	100	Shattuck, G. O.	50
Forbes, Mrs. J. M.	200	Shaw, Mrs. Cora L.	30
Forbes, J. M.	100	Sparks, Mrs. Mary C.	300
Gardner, George	50	Thayer, Nathaniel	100
Gardner, John L.	100	Upham, George P.	50
Gray, John C.	500	Ware, Charles E.	250
Grew, Henry S.	50	Weld, W. G.	50
Grover, W. O.	50	Welles, Miss Jane	1,000
Hemenway, Mrs. A.	100	Wheelwright, A. C.	50
Higginson, F. L.	250	Whitney, H. A.	200
Higginson, George	100	Wigglesworth, Misses	100
Hooper, Robert W.	250	Winthrop, Robert C.	50
Hooper, Mrs. S.	100		$11,455

From Harold Whiting, $90, for books for the Laboratory.

From George W. Wales, Esq., $200, for books for the Library, in continuance of former gifts for the same purpose.

From an anonymous friend, $500, to increase the salary of the Professor of Entomology.

Through Professor Gray, an anonymous gift to the Herbarium of $500.

From the Massachusetts Society for Promoting Agriculture, $2500, for the improvement and development of the Botanic Garden and Arnold Arboretum.

For Lecturer on Political Economy, through Hon. William Gray, Treas., $700.

OTHER GIFTS.

From Mrs. Anna S. Bigelow, a portrait of the late Tyler Bigelow.

From the executors of Rev. R. M. Hodges, a rocking chair formerly belonging to President James Walker, to be placed in the Faculty's room.

Dr. Martyn Paine's Library.

From Dr. George Stevens Jones, a picture of Isaac Royall and his family, by Robert Feke.

From Dr. Charles E. Ware, a copy of the portrait of his father, the late Dr. Henry Ware.

From Joseph Coolidge, Esq., a Chronometer for the Observatory.

Professor Asa Gray reports the following gifts received and expended by him for improvements upon the Herbarium building: —

Nathaniel Thayer, ...	$500	Quincy A. Shaw, ...	$300
H. H. Hunnewell, ...	500	John C. Gray, ...	250
John C. Phillips, ...	500	Henry P. Kidder, ...	250
Stephen Salisbury, ...	500	John L. Gardner, ...	250
J. Montgomery Sears, . . .	500	S. D. Warren, ...	250
T. Jefferson Coolidge, . . .	500	F. H. Peabody, ...	200
			$4,500

EDWARD W. HOOPER,
Treasurer.

Boston, Dec. 23, 1879.

ACCOUNTS.

1878-79.

General Statement of Receipts and Disbursements for the year ending

INCOME.

Interest on notes, mortgages, and advances, ...		$64,880.80
" " United States Bonds, ...		4,607.40
" " Massachusetts 5% Bonds, ...		5,464.45
" " Policy Mass. Hospital Life Insurance Co., ...		212.50
" " New Boston Coal Mining Co. Bonds, ...		350.00
" " District of Columbia Bonds, ...		1,681.50
" " Railroad Bonds.		
Buffalo, Bradford, and Pittsburg, . . .	4,200.00	
Burlington & Mo. River in Iowa, 8%, . .	2,928.45	
" " " in Iowa, 7%, . .	3,500.00	
Chicago, Burlington, and Quincy, . . .	2,970.00	
Eastern, ...	1,754.37	
Ionia and Lansing, ...	5,760.00	
Michigan Southern & Northern Indiana,	70.00	
New York Central, ...	1,680.00	
Philadelphia, Wilmington, and Baltimore,	6,000.00	
Summit Branch, ...	700.00	
		29,562.82
" " Municipal Bonds.		
Brookline, ...	150.00	
Cambridge, 1884, ...	661.17	
Cambridge, 1904, ...	127.50	
Chicago, ...	108.16	
Cincinnati, ...	140.00	
Fall River, ...	1,095.00	
Hartford, ...	852.34	
Lawrence, ...	300.00	
Minneapolis, ...	160.00	
Providence, ...	752.78	
Springfield, ...	210.00	
		4,556.95
Dividends on Stocks.		
Charles River National Bank, ...	420.00	
First (Cambridge) " "	400.00	
Fitchburg " "	168.00	
Massachusetts " "	120.00	
Merchants " "	1,584.00	
New England " "	240.50	
Old Boston " "	500.00	
Schenectady " " (N. Y.),	200.00	
Bank taxes refunded, ...	870.60	
		4,503.10
Amoskeag Manufacturing Co., ...	1,200.00	
Cocheco " "	600.00	
Massachusetts " "	420.00	
Merrimack, " "	1,020.00	
Nashua " "	1,260.00	
Pacific Mills " "	2,800.00	
Amounts carried forward, . .	$7,300.00	$115,819.52

by the Treasurer of Harvard College,
August 31, 1879.

EXPENSES.

Paid to account of Expenses in the		
University, as per Table I. (page 30), ...		$35,784.44
College, " " II. (page 34).		
Salaries for instruction, ...	129,090.64	
Repairs, ...	4,764.43	
Insurance on College Edifices, not valued on Treasurer's books, ...	807.87	
General Expenses, ...	30,160.73	
Scholarships, ...	24,754.00	
Beneficiaries, ...	1,208.79	
Prizes for Reading, &c., ...	1,187.89	
Botanic Garden, ...	4,184.23	
Herbarium, ...	1,525.70	
Gymnasium, ...	2,186.66	
		199,870.94
Library, as per Table III. (page 37).		
Books, ...	11,376.68	
Salaries and other expenses, ...	20,607.64	
		31,984.32
Divinity School, as per Table IV. (page 38).		
Salaries and other expenses, ...	15,987.68	
Scholarships, ...	1,721.66	
		17,709.34
Law School, as per Table V. (page 39), ...		31,362.15
Medical School, as per Table VI. (page 40), ...		43,188.87
Dental School, as per Table VII. (page 41), ...		3,090.27
Lawrence Scientific School, as per Table VIII. (page 42).		
Salaries and other expenses, ...	16,233.01	
Museum of Comparative Zoölogy, ...	39,886.73	
		56,119.74
Observatory, as per Table IX. (page 43), ...		16,335.19
Bussey Institution, as per Table X. (page 44),	14,638.49	
James Arnold Fund,	3,909.59	
		18,548.08
Amount carried forward		$453,993.34

General Statement of Receipts and Disbursements for the year ending

INCOME.

Amounts brought forward, ...	$7,300.00	$115.819.52
Dividends on Stocks, continued.		
Stark Mills Manufacturing Co., ...	1,330.00	
Wamsutta " "	480.00	
		9,110.00
Chicago, Burlington, and Quincy R. R.,	4,432.00	
Boston and Albany Railroad, ...	400.00	
Pittsfield and North Adams Railroad, . .	315.00	
Quincy Railroad Bridge Company, . . .	100.00	
Pittsburg, Ft. Wayne, & Chicago R. R.,	350.00	
		5,597.00
Real Estate, from rents, &c. (gross receipts).		
Cambridge (Houses and Lands), ...	36,725.00	
Boston (general investments), ...	43,048.92	
Bussey stores, ...	34,573.94	
Sundry estates, ...	8,469.02	
		122,816.88
Term Bills.		
College, as per Table II., ...	159,634.35	
Divinity School, as per Table IV., ...	2,668.92	
Law School, as per Table V., ...	20,925.04	
Medical School, as per Table VI., ...	55,531.48	
Dental School, as per Table VII., ...	2,200.00	
Lawrence Scientific School, as per Table VIII., .	2,540.00	
Bussey Institution, as per Table X., ...	470.50	
		243,970.29
Sundries.		
From Wm. Pennoyer Annuity, ...	280.36	
Trustees of Thayer Scholarships, ...	3,500.00	
" Count Rumford's Legacy, . . .	586.51	
" Edward Hopkins, ...	234.90	
Pew rents in Appleton Chapel, ...	210.00	
For use of Library by resident graduates and others,	155.00	
Degrees of Ph.D. and S.D., ...	180.00	
Degree of Batchelor of Arts out of course, Examination fees, &c., ...	186.50	
Fees in Infirmary & Laboratory, Dental School, . .	795.81	
Printing by College Press for other Departments, .	2,149.13	
Sales of wood, grass, &c., ...	297.90	
Sale of time signals from Observatory, ...	2,837.50	
Sale of tickets to Commencement Dinner of 1879, .	726.00	
United States Coast Survey, for Observatory work,	861.00	
Sale of books, pamphlets, Bulletins, &c., ...	32.60	
Use of Sanders Theatre by Societies, ...	12.77	
		13,045.98
Sundry gifts for immediate use, see page 8, ...		17,095.00
Subscriptions from College Officers for Pension System (to be repaid), ...		690.00
Amount carried forward, ...		$528,144.67

by the Treasurer of Harvard College, August 31, 1879.

EXPENSES.

Amount brought forward,			$453,998.34
Real Estate, expenses.			
Insurance.			
Cambridge,	1,256.80		
Boston,	1,000.00		
Bussey stores,	1,931.75		
		4,188.55	
Taxes.			
Cambridge,	2,263.68		
Boston,	5,208.32		
Bussey stores, &c.,	6,317.17		
		13,789.17	
Interest.			
Cambridge (on advances),	420.00		
Bussey stores (on advances),	2,392.93		
		2,812.93	
Repairs, improvements, care, cleaning and sundries.			
Cambridge,	13,258.20		
Boston,	680.02		
Bussey stores,	3,578.82		
		17,517.04	
Heating and hoisting for Bussey stores,		3,226.58	
			41,534.27
Annuities.			
Bussey,		6,900.00	
Gore,		1,200.00	
Mary Osgood,		360.00	
Lucy Osgood,		780.00	
Class of 1802,		170.00	
Anonymous,		720.00	
			10,130.00
Sundry payments from income.			
To the Treasurer of the Museum of Fine Arts, from Gray Fund for Engravings,		1,378.86	
The income of the Daniel Williams Fund for the benefit of the Herring Pond and Mashpee Indians,		971.83	
The income of the Sarah Winslow Fund, to the Minister and Teacher at Tyngsboro', Mass.,		278.54	
Chinese Instruction, expenses,		30.05	
To lecturer on Political Economy,		700.00	
			3,359.28
Amount carried forward,			$509,016.89

General Statement of Receipts and Disbursements for the year ending

INCOME.

Amount brought forward,		$528.144.67
Income received with funds.		
Tufts Medical Fund,		48.21
		528,192.88

RECEIPTS EXCLUSIVE OF INCOME.

GIFTS.

Sever Hall Building Fund,	$100,000.00	
Sever Fund (unrestricted),	20,000.00	
Sever " for Library,	20,000.00	
Thomas Tileston of New York Endowment,	40,000.00	
Subscriptions for Divinity School,	38,030.25	
Bemis Annuity Fund,	50,000.00	
Quincy Tufts Medical Fund,	2,000.00	
Thomas Connell Bequest,	408.95	
Gift for Pension system,	1,000.00	
Edward Russell Scholarship (additional),	100.00	
		271,539.20

SALES.

$127,500 United States 6% called Bonds,	130,656.25	
45,000 Massachusetts 5% Bonds,	49,387.50	
3,000 Brookline Water Bonds,	3,648.75	
14,000 Combridge City "	15,206.25	
26,000 Fall River " "	28,380.00	
20,000 Hartford " "	22,200.00	
5,000 Lawrence " "	5,437.50	
3,000 Springfield " "	3,056.25	
20,000 Providence " "	21,400.00	
35,000 Burl'n & Mo. River (Iowa) 8% R. R. Bonds,	40,600.00	
100,000 District of Columbia Bonds,	87,000.00	
Chicago, Burl. & Quincy R. R. Stock, 200 sh. & 8 rights,	22,879.15	
Boston & Albany R. R. Stock, 100 shares,	13,225.00	
		443,076.65

SUNDRIES.

Chicago Certificates of Indebtedness paid off,	6,000.00	
From Dining Hall Association, to reduce debt,	1,500.00	
" " " one year's Insurance,	168.75	
Advances to College Wharf repaid,	319.31	
Money advanced by Alexander Agassiz, Esq., for extension of Museum of Zoölogy,	8,000.00	
Money for land taken from the Bussey Estate by the Town of Dedham	200.00	
Final dividend of Insurance on account of the fire of November, 1872, for the Bussey Estate,	156.00	
		16,344.06
Balance, September 1, 1878.		
In Suffolk National Bank,	4,415.82	
In hands of Allen Danforth, Bursar, including Term Bills not collected at that date,	71,740.91	
		76,156.73
		$1,335,309.52

by the Treasurer of Harvard College,
August 31, 1879.

EXPENSES.

Total of expenses brought forward, ...				$509,016.89

INVESTMENTS AND SUNDRY PAYMENTS.

United States 5% Bonds, ...	$185,000 cost,	190,781.25		
Burl. & Mo. River (Iowa) 8% R. R. Bds. (convertible), ...	20,000 "	23,230.00		
Burl. & Mo. River (Nebraska) R. R. Bds. 6's, ...	50,000 "	51,093.75		
Nebraska Rail Road Bonds, 7's, ...	50,000 "	55,836.11		
District of Columbia Bonds, 3-65's, . .	100,000 "	78,162.50		
Chicago, Burl. & Quincy R. R. Stock, 52 shares,	"	5,200.00		
In Notes and Mortgages, ...	$1,651,350.00			
Less Notes and Mortgages paid off,	1,347,380.29	303,969.71		
Paid Baring Brothers & Co. on account, . .	10,997.75			
Less amount paid by them by order, .	7,541.61	3,456.14		
Paid on account of building Sever Hall, ...		16,887.17		
Advances for Scudder's Catalogue, ...		1,392.28		
Paid Unitarian Church of Malden, from Winn Fund, by order of Supreme Court, ...		3,000.00		
Woburn Real Estate purchased by foreclosure, . . .		1,500.00	734,508.91	
Balance, August 31, 1879.				
Cash in Suffolk National Bank, ...		7,621.52		
Cash in hands of Allen Danforth, Bursar, ...		7,360.53		
Term Bills not collected, ...		76,801.67	91,783.72	
				$1,335,309.52

The following Account exhibits the State of the Property, as embraced in the Treasurer's Books, August 31, 1879.

Notes and Mortgages.				
Mortgages			$519,979.36	
Long Wharf Co.'s Notes			60,000.00	
Phil., Wil. & Balt. R. R. Notes			100,000.00	
Manufacturing Co.'s Notes			420,000.00	
Personal Notes (endorsed)			16,000.00	$1,115,979.36
United States 6% Bonds,	$50,000	valued at		50,000.00
United States 5% Bonds,	200,000	" "		205,781.25
Massachusetts Bonds, 5's,	70,000	" "		70,000.00
*New Boston Coal Mining Co. Bonds,	10,000	" "		9,000.00
*Erie Basin Dock & Warehouse "	20,000	" "		20,000.00
Municipal Bonds.				
*Cincinnati,	2,000.00	valued at	2,000.00	
*Minneapolis,	2,000.00	" "	2,000.00	4,000.00
Railroad Bonds.				
*Buffalo, Bradford, and Pittsburg,	60,000	val'd at	60,000.00	
Burl'n & Mo. River in Iowa, 8%,	20,000	" "	23,230.00	
" " " in Iowa, 7%,	50,000	" "	54,945.00	
" " " in Nebraska,	50,000	" "	51,093.75	
Chicago, Burlington, and Quincy,	47,000	" "	46,600.00	
Eastern,	50,000	" "	48,000.00	
*European and North American,	1,000	" "	1,000.00	
Ionia and Lansing,	72,000	" "	59,520.00	
*Michigan So. & No. Indiana,	1,000	" "	1,000.00	
Nebraska (guaranteed),	50,000	" "	55,836.11	
New York Central,	28,000	" "	27,000.00	
Phil., Wil., and Baltimore,	100,000	" "	95,000.00	
*Summit Branch,	10,000	" "	10,000.00	533,224.86
Railroad Stock.				
Chicago, Burlington, and Quincy,	380	shares,	36,140.22	
*Pittsburgh, Fort Wayne and Chicago,	50	"	5,000.00	
Pittsfield and North Adams,	63	"	6,300.00	
Quincy R. R. Bridge Co.,	10	"	1,250.00	
*St. Paul & Duluth,	36	"	1,200,00	49,890.22
Manufacturing Stock.				
Amoskeag,	12	shares,	12,000.00	
Cocheco,	20	"	6,512.50	
Massachusetts Mills,	7	"	6,600.00	
Merrimack,	17	"	17,000.00	
Amounts carried forward,			$42,112.50	$2,099,988.19

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*Received as gifts.

Amounts brought forward,		$42,112.50	$2,099,988.19
Manufacturing Stock (continued).			
Nashua,	36 shares,	25,560.00	
*New Bedford Copper Co.,	5 "	250.00	
*New England Glass Co.,	1 "	325.00	
Pacific Mills,	20 "	17,468.29	
Stark Mills,	19 "	18,900.00	
Wamsutta Mills,	80 "	8,880.00	
			113,495.79
Bank Stock.			
Charles River,	60 shares,	6,000.00	
First Cambridge,	50 "	5,000.00	
Fitchburg,	24 "	2,403.00	
Massachusetts,	12 "	3,000.00	
Merchants,	264 "	34,732.00	
New England,	37 "	3,896.00	
Old Boston,	200 "	8,933.00	
*Schenectady (N. Y.),	40 "	2,200.00	
			66,164.00
Real Estate.			
Houses and Lands in Cambridge yielding income,		357,163.83	
Unimproved Lands in Cambridge,		106,887.49	
Bussey Real Estate in Boston and Dedham,		413,092.80	
Amory Estate, Franklin Street, Boston,		165,615.81	
Webb Estate, Washington Street, Boston,		164,604.79	
Andrews Estate, Washington Street, Boston,		147,000.00	
Estate on Hawley Street, Boston,		38,650.78	
Estate on Hawkins Street, "		29,476.09	
Jarvis Estate, Baltimore,		11,800.00	
Ward's (Bumkin) Island, Boston Harbor,		1,200.00	
Reversion of Buildings on Brattle Street, Boston,		1,000.00	
Real Estate by foreclosure		1,500.00	
			1,437,991.59
Sundries.			
In hands of Count Rumford's Trustees in Paris,		10,000.00	
Annuity of William Pennoyer, valued at		4,444.44	
Policy of the Mass. Hospital Life Insurance Co.,		5,000.00	
Due from Dining Hall Association,		40,232.16	
" " Lawrence Scientific School,		8,585.66	
" " Bussey Trust,		39,726.13	
" " Dental School,		16,376.80	
Advances to Scudder's Catalogue,		1,392.28	
Balance of acct. for decorating Appleton Chapel,		2,859.62	
Balance of account repairing College Wharf,		1,119.12	
Term bills not collected August 31, 1879,		76,801.67	
Baring Brothers & Co.,		5,134.73	
			211,672.61
Cash in Suffolk National Bank,		7,621.52	
" " hands of Allen Danforth, Bursar,		7,360.53	14,982.05
		Total	$3,902,181.73

* Received as gifts.

The foregoing Property represents the following Funds and Balances, and is answerable for the same.

UNIVERSITY FUNDS.

Principal, Sept. 1, 1878.		Principal, Aug. 31, 1879.	
$159,891.86	Stock Account (so called),	$160,600.35	
138,174.21	Insurance and Guaranty Fund (so called),	141,638.74	
5,250.00	Samuel D. Bradford Fund,	5,250.00	
15,750.00	Israel Munson Fund,	15,750.00	
17,004.97	Leonard Jarvis Fund,	17,004.97	
4,197.01	Peter C. Brooks Fund for building a President's House,	3,257.54	
156.08	Thomas Cotton Fund,	155.82	
57,828.97	John Parker Fellowships,	58,063.66	
10,616.32	Harris Fellowships,	10,587.54	
12,139.61	John Thornton Kirkland Fellowship,	12,454.16	
25,571.68	Graduates' Scholarship,	26,639.92	
1,358.90	Sumner Prize Fund,	1,436.09	
45,409.19	Winn Prof. of Ecclesiastical History,	48,339.32	
	Sever Fund (unrestricted)	20,000.00	
	Gift for Pension System	1,002.39	
			517,180.50
	COLLEGE FUNDS.		
27,748.64	Alford Professorship,	27,748.64	
28,337.40	Boylston “	28,337.40	
21,619.50	Eliot “	21,619.50	
10,000.00	“ “ (Jon. Phillips's gift),	10,000.00	
3,500.01	Erving “	3,500.01	
35,990.99	Fisher “	35,990.99	
19,549.77	Hersey “	20,217.08	
14,950.73	“ “ (Thomas Lee's gift),	15,799.95	
3,747.33	Hollis “ (Mathematics),	3,747.33	
27,720.69	Hollis “ (Divinity),	29,295.24	
43,062.93	McLean “	43,062.93	
21,000.00	Perkins “	21,000.00	
25,020.19	Plummer “	25,020.19	
52,500.00	Pope “	52,500.00	
52,996.37	Rumford “	52,996.37	
23,139.83	Smith “	23,139.83	
16,240.38	Fund for Permanent Tutors,	16,240.38	
125,000.00	Class Subscription Fund,	125,000.00	
12,472.44	Daniel H. Peirce “	12,547.24	
1,635.26	Paul Dudley Fund for Lectures,	1,728.13	
31,500.00	Jonathan Phillips Fund (unrestricted)	31,500.00	
1,050.00	John A. Blanchard “ “	1,050.00	
2,749.65	John W. P. Abbot “ “	2,905.85	
346.94	Henry Flynt's Bequest,	346.36	
2,576.96	Abbot Scholarship,	2,573.33	
780.33	Alford “	784.63	
5,402.51	Bassett “	5,458.33	
$1,098,987.10	Amounts carried forward,	$614,109.71	517,180.50

Principal, Sept. 1, 1878.		Principal, Aug. 31, 1879.	
$1,098,987.10	. . . . Amounts brought forward,	$614,109.71	517,180.50
12,084.50	**Bigelow** Scholarship,	12,020.93	
96,291.36	**Bowditch** Scholarships,	95,559.69	
2,732.32	**Browne** “	2,737.50	
7,105.73	Class of 1802 Scholarship,	7,089.35	
3,193.88	“ 1814 “	3,175.30	
4,906.56	“ 1815 “ (Kirkland),	4,935.28	
3,716.23	“ 1817 “	3,727.30	
2,644.58	“ 1835 “	2,644.82	
3,622.03	“ 1841 “	3,652.76	
2,412.79	“ 1852 “ (Dana)	2,549.85	
5,363.14	**Crowninshield** “	5,667.76	
5,356.85	**W. S. Eliot** “	5,360.57	
2,402.21	**Greene** “	2,418.64	
5,146.50	**Hodges** “	5,438.85	
6,041.58	**Farrar** “	6,034.77	
4,960.87	**Levina Hoar** “	5,042.65	
4,787.88	**Hollis** “	4,809.84	
1,376.49	**Matthews** “ (balance),	974.03	
7,933.11	**Morey** “	7,883.70	
6,360.21	**Pennoyer** “	6,369.40	
105.86	**Edward Russell** “	217.56	
4,076.85	**Saltonstall** “ (Mary & Leverett),	4,008.42	
513.45	“ “ (Dorothy),	542.59	
5,197.33	**Slade** “	5,242.52	
3,168.17	**Sever** “	3,173.11	
9,329.99	**Sewall** “	9,359.93	
33,225.19	**Shattuck** “	33,592.49	
2,744.99	**Story** “	2,750.91	
4,212.11	**Gorham Thomas** “	4,201.35	
6,331.34	**Toppan** “	6,390.94	
25,151.14	**Townsend** “	25,267.22	
3,844.33	**Walcott** “	3,862.67	
6,963.81	**Whiting** “	7,359.37	
11,514.00	Exhibitions,	11,467.01	
1,742.18	Senior Exhibition,	1,751.13	
1,200.00	**Samuel Ward** Fund,	1,200.00	
855.48	**John Glover** Fund,	903.99	
1,825.15	**Rebecca A. Perkins** Fund,	1,928.81	
10,389.31	**Quincy Tufts** Fund,	10,611.61	
16,419.38	**Lee** Prizes for Reading,	16,261.98	
4,330.50	**Boylston** Prizes for Elocution,	4,381.50	
11,127.79	**Bowdoin** Prizes for Dissertations,	11,334.86	
975.62	**Hopkins** Gift for “Deturs,”	988.07	
20,096.26	Botanic Garden Fund,	20,509.98	
15,882.31	Mass. Fund for Botanic Garden,	15,882.31	
14,712.06	Herbarium Fund,	14,844.17	
125.00	Salary account (unexpended balance),	125.00	
			1,020,362.20
$1,506,484.97	. . . Amounts carried forward,		$1,537,542.70

Principal, Sept. 1, 1878.		Principal, Aug. 31, 1879.	
$1,503,484.97	. . . . . Amounts brought forward, ...		$1,537,542.70
	LIBRARY FUNDS.		
10,231.60	Subscription for Library, ...	10,519.68	
2,093.46	**Bowditch** Fund, ...	2,108.30	
5,233.90	**Denny** "	5,264.45	
5,250.50	**Farrar** "	5,263.22	
2,859.99	**Haven** "	3,022.44	
5,203.09	**Hayward** "	5,253.59	
2,341.92	**Hollis** "	2,351.68	
2,122.78	**Homer** "	2,106.08	
5,207.47	**Lane** "	5,271.23	
60,059.60	**Minot** "	60,028.47	
5,227.27	**Salisbury** "	5,259.91	
	Sever "	19,994.00	
8,917.99	**Shapleigh** "	8,956.92	
34,149.12	**Sumner** "	33,936.13	
5,031.10	**Tucker** "	5,000.00	
5,263.55	**Ward** "	5,259.91	
296.50	**Wales** "	200.56	
15,772.73	**Walker** "	15,831.01	
340.58	Sundry gifts, ...	110.21	
15.89	Sales of pamphlets, etc.	5.00	
			190,742.79
	LAW SCHOOL FUNDS.		
10,176.18	Law School (balance), ...	5,619.17	
15,750,00	**Dane** Professorship, ...	15,750.00	
23,979.82	**Bussey** "	23,979.82	
8,340.81	**Royall** "	8,340.81	
			53,689.80
	MEDICAL SCHOOL FUNDS.		
26,381.49	Medical School (balance), ...	43,144.78	
19,192.65	**Jackson** Medical Fund, ...	19,192.65	
14,569.22	**Geo. C. Shattuck** Fund, ...	14,836.70	
10,671.01	**Warren** Fund for Anatom'l Museum,	10,927.64	
4,134.12	**Boylston** Fund for Medical Prizes,	4,252.93	
1,835.41	" " " " Books,	1,939.64	
2,130.11	Medical Library Fund, ...	2,246.09	
27,232.97	Medical School Building Fund, . . .	28,779.80	
	Quincy Tufts Medical Fund, . . .	2,000.00	
			127,320.23
	DIVINITY SCHOOL FUNDS.		
18,451.26	General Fund, ...	16,099.42	
37,583.74	**Bussey** Professorship, ...	37,583.74	
16,015.81	**Parkman** "	16,015.81	
6,008.43	**Hancock** "	6,008.43	
$1,916,557.04	. . . . . Amounts carried forward,	$75,707.40	1,909,295.52

Principal, Sept. 1, 1878.
$1,916,557.04
20,280.38
9,184.69
5,250.00
2,100.0
1,050.0
1,050.0
1,050.
12,571.
2,177
1,05
5
2,
2
1
2
1
$2,910,

Principal, Sept. 1, 1878.			Principal, Aug. 31, 1879.
$2,910,520.29	. . . . . Amounts brought forward, ...		$3,060,680.87
	OTHER FUNDS FOR SPECIAL PURPOSES.		
413,092.80	**Bussey** Trust (income thereof, ½ to Bussey Institution, ¼ to Law School, and ¼ to Divinity School), . . .	413,092.80	
12,644.95	**Bussey** Building Fund, ...	5,196.15	
147,578.36	**James Arnold** "	150,419.12	
	Arnold Arboretum	2,682.08	
42,000.00	**James Savage** "	42,000.00	
20,778.86	**Gray** Fund for Engravings, . . .	20,466.40	
22,466.27	**Gore** Annuity Fund, ...	22,542.34	
7,184.68	**Mary Osgood** Annuity Fund, . .	7,232.74	
13,074.32	**Lucy Osgood** Annuity Fund, . .	13,086.92	
	Bemis Annuity Fund, ...	51.183.31	
2,035.48	**Gospel Church** Fund, ...	2,151.07	
3,171.50	**John Foster** Fund (income to Law School, Divinity School, and Medical School, in turn), ...	3,171.50	
	Sever Hall Building Fund, . . .	85,640.24	
	Chinese Subscription (balance), . .	969.95	
	Suspense Account, ...	840.00	
			820,574.62
	FUNDS IN TRUST FOR PURPOSES NOT CONNECTED WITH THE COLLEGE.		
16,140.71	**Daniel Williams** Fund for the conversion of the Indians, ...	16,085.68	
4,850.70	**Sarah Winslow** Fund, forthe Minister and Teacher at Tyngsborough, Mass.,	4,840.56	
			20,926.24
$3,615,538.87			$3,902,181.73

Changes in the Funds during the Year 1878-79.

Total amount of Funds, August 31, 1879, as before stated,	$3,902,181.73	
Total amount of Funds, September 1, 1878, as before stated,	3,615,538.87	
Showing a total increase during the year of		$286,642.86
Which is made up as follows: —		
Gifts forming new Funds or increasing old ones,	271,539.20	
Increase more than decrease of Funds which appear both at the beginning and end of year (from excess of income over current expenditure),	10,186.20	
Increase of Funds established during the year, and balances created during the year,	13,118.65	
Net increase of Insurance and Guaranty Fund by gain from sale of securities,	8,055.58	
Increase of Graduates Scholarship Fund by gain from change of investment,	400.00	
Increase of Stock Account, being the excess of income over expenditures in the College, Library, and University accounts,	708.99	304,008.62
Deduct from the above amount on account of		
Sever Hall Fund, the part principal spent on building,	14,359.76	
Winn Professorship, paid Unitarian Church of Malden, by order of the Supreme Court,	3,000.00	
Sever Book Fund, temporarily overdrawn,	6.00	17,365.76
		$286,642.86

Net increase of Funds which appear at the beginning and end of the year, as above,	10,186.20	
Increase of other Funds, as above, excluding gifts,	22,283.22	32,469.42
Less deduction, as above,		17,365.76
Leaving amount of the net increase of the Funds and balances, excluding gifts, as is also shown in the following table,		$15,103.66

Statement showing Changes in the

Increase of **Funds** which appear both at the beginning and the end of the year, being the excess of income (including gifts for immediate use) over payments towards the special objects of those Funds.

John Parker Fellowships,	$234.69
John Thornton Kirkland Fellowship,	814.55
Graduates' Scholarship,	668.29
Sumner Prize Fund,	77.19
Winn Professorship,	930.18
Hersey "	667.81
" " (**Thomas Lee's** gift),	849.22
Hollis " of Divinity,	1,574.55
Daniel H. Peirce Fund,	74.80
Paul Dudley Fund for Lectures,	92.87
John W. P. Abbott Fund,	156.20
Alford Scholarship,	4.30
Bassett "	55.82
Browne Scholarships,	5.18
Class of 1815 Scholarship (**Kirkland**),	28.72
" **1817** "	11.07
" **1835** "	.24
" **1841** "	30.73
" **1852** " (**Dana**),	137.06
Crowninshield "	304.62
W. S. Eliot "	4.22
Greene "	16.43
Hodges "	292.35
Levina Hoar "	81.78
Hollis "	21.96
Pennoyer "	9.19
Edward Russell "	11.70
Saltonstall " (**Dorothy**),	29.14
Slade "	45.19
Sever "	4.94
Sewall "	29.94
Shattuck "	367.30
Story "	5.92
Toppan "	59.60
Townsend "	116.08
Walcott "	18.34
Whiting "	395.56
Senior Exhibition,	8.95
John Glover Fund,	48.56
Rebecca A. Perkins Fund,	103.66
Quincy Tufts Beneficiary Fund,	222.30
Boylston Prizes for Elocution,	51.00
Bowdoin " Dissertations,	207.07
Amount carried forward,	$8,368.72

Different Funds during the year 1878–79.

Decrease of Funds, which appear both at the beginning and the end of the year, being the excess of payments over income received for the special objects of those Funds.

Peter C. Brooks Fund,	$939.47
Thomas Cotton "	.26
Harris Fellowship,	28.78
Henry Flynt Bequest,	.58
Abbot Scholarship,	3.63
Bigelow "	63.57
Bowditch Scholarships,	731.67
Class of 1802 Scholarship,	16.38
" **1814** "	18.58
Farrar "	6.81
Matthews " (balance),	402.46
Morey "	49.41
Saltonstall " (**Mary & Leverett**),	68.43
Gorham Thomas "	10.76
Exhibitions,	46.99
Lee Prizes for Reading,	157.40
Homer Book Fund,	16.70
Minot " "	31.13
Sumner " "	212.99
Tucker " "	31.10
Ward " "	3.64
Wales " "	95.94
Sundry gifts for books,	230.37
Sales of pamphlets, etc.,	10.89
Law School (balance),	4,557.01
Divinity School,	2,351.84
Jackson Foundation,	65.97
Thomas Cary Scholarships,	40.38
George Chapman Scholarship,	63.58
Sturgis Hooper Fund,	160.00
Agassiz Building "	4,651.99
Bussey Building "	7,448.80
Gray Fund for Engravings,	312.46
Lucy Osgood Annuity Fund,	37.40
Daniel Williams Fund,	55.03
Sarah Winslow "	10.14
Amount carried forward,	$22,932.54

Statement showing the Changes in the Funds

Amount brought forward,		$8,368.72
Hopkins Gift for "Deturs,"		12.45
Botanic Garden Fund,		418.72
Herbarium Fund,		132.11
Subscription for Library,		288.08
Bowditch Book Fund,		14.84
Denny " "		30.55
Farrar " "		12.72
Haven " "		162.45
Hayward " "		50.50
Hollis " "		9.76
Lane " "		63.76
Salisbury " "		32.64
Shapleigh " "		38.93
Walker " "		58.28
Medical School (balance),		16,763.29
George C. Shattuck Fund,		267.48
Warren Fund for Anatomical Museum,		256.63
Boylston Fund for Medical Prizes,		118.81
Boylston " " Books,		104.23
Medical Library Fund,		113.98
Medical School Building Fund,		1,546.83
J. H. Kendall Scholarship,		19.61
Nancy " "		11.43
Joshua Clapp "		28.64
Divinity School beneficiary money returned,		76.62
David Sears Fund,		570.90
Josiah Quincy "		468.25
James Arnold "		2,840.76
Gore Annuity Fund,		76.07
Mary Osgood Annuity Fund,		48.11
Gospel Church Fund,		115.59
		33,118.74
Increase of Funds established during the year.		
Pension Fund,	2.39	
Bemis Annuity Fund,	1,183.31	
		1,185.70
Observatory, credit balance created,	7,490.92	
Arnold Arboretum, credit balance created,	2,632.08	
Suspense Account, " " "	840.00	
Chinese Subscription, unexpended balance,	969.95	
		11,932.95
Stock Account, gain from excess of income over expenditures in the College, Library, and University acc'ts, see p. 4,	708.99	
Insurance and Guaranty Fund, net gain from sale of securities,	8,055.58	
Graduates Scholarship, gain from change of investment,	400.00	
		9,164.57
Total,		$55,401.96

during the year 1878–79. (Continued.)

Amount brought forward,		$22,932.54
Other decrease as follows:		
Winn Professorship, paid Unitarian Church of Malden,	3,000.00	
Sever Book Fund,	6.00	
Sever Hall Building Fund,	14,359.76	17,365.76
		40,298.30
Balance, which is the net increase of the Funds for the year 1878-79, apart from gifts,		15,103.66
Total,		$55,401.96

The following tables are not found, in their present form, in the Treasurer's books. They are intended to exhibit with some detail the resources and the expenditures of each department of the University. The income of every fund held by the University is given in these tables, and also the sum paid out for the specific object of each and every fund, in case that sum be either less or more than the actual income of the fund. If the object to which the income of a fund is to be applied be a general one, — like salaries, for example,— no separate mention is made in these tables of that appropriation. That particular payment is merged with others of the same kind under the general heading. A balanced summary of these tables will be found on page 47.

Table No. I.

THE UNIVERSITY.

RECEIPTS.

Income of the unappropriated fund heretofore called the Stock Account,	$9,081.81	
Income of the following funds : —		
Insurance and Guaranty,	7,655.67	
Israel Munson,	894.60	
Leonard Jarvis,	960.64	
Samuel D. Bradford,	298.20	
Peter C. Brooks,	238.39	
Thomas Cotton,	8.35	
Parker Fellowship,	3,284.69	
John Thornton Kirkland Fellowship,	689.55	
Harris Fellowship,	602.99	
Graduates Scholarship,	1,468.29	
Sumner Prize,	77.19	
Winn Professorship,	2,430.13	
Sever,	994.00	
Pension,	2.39	
		28,686.89
From resident graduates and others for the use of the Library,		155.00
For the degrees of Ph.D. and S.D.,		180.00
For care of the **Sarah Winslow** Fund,		7.14
Balance remaining after dividing the net income among the Funds,		247.14
For use of Sanders Theatre by societies,		12.77
Examination fees, Chicago,		20.00
		$29,308.94

PAYMENTS.

Overseers' Expenses.		
Advertising,	$72.22	
Printing President's Annual Report,	604.18	
Printing Treasurer's " "	121.00	
Printing other reports, &c.,	89.85	887.25
Office Expenses.		
President's	247.15	
Treasurer's	267.74	
Amounts carried forward,	$514.89	$887.25

Table I., continued.

PAYMENTS.

Amounts brought forward, . . .	$514.89	$887.25
Bursar's	564.78	
Corporation Rooms (fuel, rent, &c.), ...	1,694.65	
		2,774.32
Salaries.		
President, ...	$5,008.61	
Treasurer, ...	4,000.00	
Secretary of the Board of Overseers, ...	100.00	
Bursar, ...	3,000.00	
Bursar's Assistant, ...	950.00	
Secretary at Cambridge, ...	2,000.00	
Assistant Secretary at Cambridge, ...	1,500.00	
For keeping Treasurer's books and copying records and other papers, ...	2,600.00	
Superintendent of Buildings, ...	1,500.00	
		20,658.61
For Salary of Lecturer on Ecclesiastical History (from Winn Fund), ...		1,500.00
Fellowships.		
John Parker, ...	3,050.00	
Harris, ...	631.77	
John Thornton Kirkland, ...	375.00	
Graduates Scholarship, ...	800.00	
		4,856.77
Memorial Hall and Sanders Theatre.		
Repairs, fuel, gas, &c., ...	696.48	
Insurance, ...	375.00	
		1,071.48
Sundries.		
Advertising, ...	267.46	
Diplomas, ...	31.85	
Labor, &c. on grounds outside of College Yard,	798.72	
Repairs and improvements on the President's house,	1,177.86	
Subscription to Mercantile Agency, ...	100.00	
Watering streets, ...	205.00	
Watchmen, ...	427.50	
Examinations for Women, ...	54.00	
Examinations at Chicago and Cincinnati, . . .	171.87	
Watchman's clock, ...	487.65	
Rent of Safe, ...	80.00	
Catalogue (extra pages), ...	42.24	
Legal services, ...	15.00	
Printing, ...	71.48	
Reception of Librarians' Association, ...	105.38	
		4,036.01
		$35,784.44

Table No. II.

THE COLLEGE.

RECEIPTS.

From Term Bills.			
Instruction,		$122,935.00	
Rents available for general expenses,		36,229.35	
Diplomas,		470.00	
			159,634.35
Income of Scholarship Funds.			
Abbot,		$146.37	
Alford,		44.30	
Bassett. From special investment,		275.00	
Bigelow,		686.43	
Bowditch. Interest,	1,493.33		
From special investment,	3,500.00	4,993.33	
Browne,		155.18	
Class of 1802,		403.62	
" **1814,**		181.42	
" **1815 (Kirkland),**		278.72	
" **1817,**		211.07	
" **1835,**		150.24	
" **1841,**		205.78	
" **1852 (Dana)** (accumulating),		137.06	
Crowninshield (accumulating),		304.62	
Wm. Samuel Eliot,		304.22	
Farrar,		343.19	
Greene,		186.43	
Levina Hoar (Town of Lincoln),		281.78	
Hodges (accumulating),		292.35	
Hollis,		271.96	
Matthews (½ of net rents of Hall),		5,004.86	
Morey,		450.59	
Pennoyer. Interest,	108.83		
Annuity,	280.36	389.19	
Edward Russell (accumulating),		11.70	
Saltonstall, Mary and Leverett,		231.57	
Saltonstall, Dorothy (accumulating),		29.14	
Savage,		300.00	
Sever,		179.94	
Sewall,		529.94	
Shattuck. Interest,	1,517.30		
From special investment,	600.00	2,117.30	
Slade,		295.19	
Story,		155.92	
Gorham Thomas,		239.24	
Toppan,		359.60	
Townsend,		1,428.53	
Walcott,		218.34	
Whiting (accumulating),		395.56	22,139.68
Received from the Trustees of the **Thayer** Scholarships,			3,500.00
Amount carried forward,			$185,274.03

TABLE II., CONTINUED.

RECEIPTS.

Amount brought forward,		$185,274.03
Other Beneficiary Funds, income of.		
"Exhibitions,"	654.00	
Senior "Exhibition,"	98.95	
Samuel Ward,	50.00	
John Glover (accumulating),	48.56	
Rebecca A. Perkins "	103.66	
Quincy Tufts,	590.10	1,545.27
Prize Funds, income of.		
Thomas Lee Prizes for Reading,	$932.60	
Ward Nicholas Boylston Prizes for Elocution,	246.00	
James Bowdoin Prizes for Dissertations,	632.07	
Edward Hopkins Gift for "Deturs,"	290.34	
		2,101.01
Funds for Instruction.		
Income of the **Alford** Professorship,	1,576.14	
Boylston "	1,609.54	
Eliot "	1,228.02	
J. Phillips's addition to Eliot Prof.,	550.00	
Erving Professorship,	198.80	
Fisher "	2,044.29	
Hersey "	667.31	
Hollis " (Mathematics),	212.83	
McLean "	2,445.98	
Perkins "	1,192.80	
Plummer "	1,421.14	
Pope "	2,982.00	
Rumford "	3,028.68	
Smith "	1,314.85	
Fund for Permanent Tutors,	922.48	
Thos. Lee Fund for the Hersey Prof.	849.22	
Class Subscription,	7,100.00	
Henry Flynt,	18.64	
Hollis Prof. of Divinity (accumulat'g),	1,574.55	
Paul Dudley Fund for Lectures, "	92.87	
Anonymous gift, to increase a salary,	500.00	
		31,529.59
Botanic Garden.		
Income of accumulated income,	175.85	
" " investment of the Garden Fund,	1,020.00	
" " the Massachusetts Fund,	902.10	
Estimated value of use of house by Prof. Gray,	1,000.00	
Gift from the Mass. Soc. for Promot'g Agriculture,	1,500.00	4,597.95
Herbarium. Income of accumulated income,	181.31	
From special investment,	960.00	
Gift for immediate use,	500.00	
Sale of duplicates, etc.,	16.50	1,657.81
Amount carried forward,		$226,705.66

TABLE II., CONTINUED.

RECEIPTS.

Amount brought forward, ...		$226,705.66
Income of Jonathan Phillips's unrestricted Fund,	1,789.20	
" " John A. Blanchard's " "	59.64	
" " Daniel H. Pierce Fund, ...	748.05	
" " J. W. P. Abbot's do. (accumulating),	156.20	
		2,753.09
Sundries.		
Pew Rents, Appleton Chapel, ...	$210.00	
For the Degree of Bachelor of Arts out of course, and examination fees, ...	166.50	
Sales of wood, grass, &c., ...	174.10	
For Printing by College Press for other departm'ts,	2,149.13	
For use of rooms by College officers, ...	200.00	
Sale of tickets to Commencement Dinner of 1879,	726.00	
Gift for books for Laboratory, ...	90.00	3,715.73
Total receipts, ...		$233,174.48

PAYMENTS.

Paid the incumbents of the following Scholarships.		
Abbot, ...	$150.00	
Alford, ...	40.00	
Basset, ...	219.18	
Bigelow, ...	750.00	
Bowditch, ...	5,725.00	
Browne, ...	150.00	
Class of 1802, ...	250.00	
" 1814, ...	200.00	
" 1815 (Kirkland), ...	250.00	
" 1817, ...	200.00	
" 1835, ...	150.00	
" 1841, ...	175.00	
Wm. Samuel Eliot, ...	300.00	
Farrar, ...	350.00	
Greene, ...	120.00	
Levina Hoar, ...	200.00	
Hollis,.	250.00	
Matthews, ...	5,407.32	
Morey, ...	500.00	
Pennoyer, ...	380.00	
Saltonstall, Mary and Leverett, ...	300.00	
Savage, ...	300.00	
Sever, ...	175.00	
Sewall, ...	500.00	
Shattuck, ...	1,750.00	
Slade, ...	250.00	
Story, ...	150.00	
Thayer, ...	3,500.00	
Gorham Thomas, ...	250.00	
Toppan, ...	300.00	
Townsend, ...	1,312.50	
Walcott, ...	200.00	24,754.00
Amount carried forward, ...		$24,754.00

Table II., continued.

PAYMENTS.

Amount brought forward,			$24,754.00
Paid other Beneficiaries.			
Exhibitions,		700.99	
Senior Exhibition		90.00	
Samuel Ward Income,		50.00	
Quincy Tufts " (part of),		367.80	1,208.79
Prizes. **Lee** Prizes for Reading,		290.00	
Boylston Prizes for Elocution,		195.00	
Bowdoin Prizes for Dissertations		425.00	
"Deturs" from **Hopkins** Fund		277.89	1,187.89
Salaries for instruction,			129,090.64
Repairs and improvements on College Edifices not valued on Treasurer's books,			4,764.48
Insurance on Coll. Edifices not valued on Treas.'s books,			807.87
Botanic Garden, for labor, repairs, and materials,			4,184.28
Herbarium, " " "			1,525.70
Gymnasium, Salary of Superintendent,		1,250.00	
Repairs,		33.83	
Gas, cleaning, and sundries,		196.73	
Fuel,		60.00	
Apparatus,		10.10	
Insurance (old building),		36.00	
" (new "),		600.00	
			2,186.66
General Expenses.			
Appropriations for collections and laboratories.			
Physical Apparatus (Prof. Lovering),	$600.00		
Mineral and Chemical (Prof. Cooke),	800.00		
Rumford (Prof. Gibbs),	300.00		
Botanical (Prof. Farlow),	94.10		
Physiological (Asst. Prof. James),	55.37		
Geological (Prof. Shaler),	339.00		
Zoölogical (Instructors Faxon and Mark),	11.80		
Fine Arts (Prof. Norton),	151.84		
Physical (Asst. Prof. Trowbridge),	63.22		
Drawing (Instructor Moore),	95.51		
		2,510.84	
Appleton Chapel. Singing, blowing organ etc.,		501.26	
Advertising,		45.75	
Books and binding,		109.02	
Clerk in Chemical Laboratory,		285.98	
Cleaning and care of College buildings not valued on Treasurer's books,		6,988.78	
College yard expenses.			
Labor and material,	3,126.41		
Manure,	31.70		
Tools, etc.,	54.91	3,213.02	
Amounts carried forward,		$13,654.15	169,710.21

TABLE II., CONTINUED.

PAYMENTS.

Amounts brought forward, . . .	$13,654.15	169,710.21
Commencement Dinner 1879, ...	982.29	
Dean's and Registrar's Office, stationery, postage, copying, etc., ...	576.12	
Diplomas, ...	189.82	
Fuel, ...	1,633.24	
Furniture, ...	74.64	
Freight, ...	105.18	
Gas, ...	1,151.31	
Maps, ...	50.00	
Incidentals, ...	45.08	
Janitors, ...	2,099.00	
Gas regulator, ...	100.00	
Mats, ...	113.00	
Music, Commencement, ...	150.00	
" Class-Day, ...	90.00	
Pews hired in Cambridge churches, ...	944.25	
Police for Commencement, ...	26.00	
Printing, ...	305.83	
Printing office, expenses, ...	3,135.38	
Services of examiners and proctors, ...	3,058.46	
" " undergraduates, ...	516.32	
Watchmen, ...	916.50	
Water rates, ...	244.16	
		30,160.73
Total payments, ...		$199,870.94

TABLE No. III.

THE LIBRARY.

RECEIPTS.

Income of the following Funds for the purchase of books.

Subscription for Library, ...	$581.18
Nathaniel I. Bowditch, ...	118.88
Denny, ...	297.29
Eliza Farrar, ...	298.26
Horace A. Haven, ...	162.45
George Hayward, ...	295.53
Thomas Hollis, ...	133.03
Sidney Homer, ...	120.59
Frederick A. Lane, ...	295.76
Charles Minot. From special investment, . . .	4,200.00
Stephen Salisbury, ...	296.89
Sever, ...	994.00
Samuel Shapleigh, ...	222.54
Amount carried forward, ...	$8,016.40

TABLE III., CONTINUED.

RECEIPTS.

Amount brought forward,		$8,016.40	
Charles Sumner,		1,853.04	
Ichabod Tucker, Interest,	1.71		
From special investment,	212.50	214.21	
Thomas W. Ward,		299.00	
George W. Wales. Gift,	$200.00		
Interest on unexpended balance,	16.87	216.87	
James Walker,		895.91	
			11,495.43
James Savage Fund for general expenses (½ of income),			1,042.80
Fines, &c.,			5.00
			12,543.23

PAYMENTS.

For Books from		
Subscription Fund,	$293.10	
Bowditch "	104.04	
Denny "	266.74	
Farrar "	285.54	
Hayward "	245.03	
Hollis "	123.27	
Homer "	137.29	
Lane "	232.00	
Minot "	4,231.13	
Salisbury "	264.25	
Sever "	1,000.00	
Shapleigh "	183.61	
Sumner "	2,066.03	
Tucker "	245.31	
Ward "	302.64	
Wales "	312.81	
Walker "	837.63	
Anonymous gift,	230.37	
Money from sales of pamphlets, duplicates. &c.	15.89	11,376.68
Salaries and wages,	16,062.38	
Binding,	996.52	
Stationery and postage,	346.60	
Fuel,	632.18	
Repairs and improvements,	483.58	
Freight,	119.91	
Cleaning,	477.88	
Printing,	1,308.87	
Furniture,	30.72	
Insurance on steam boiler,	15.00	
Incidentals,	9.16	
Water rates,	69.63	
Moving **Paine** library from New York,	55.26	20,607.64
		$31,984.32

Table No. IV.

DIVINITY SCHOOL.

RECEIPTS.

Income of the following Funds applicable to Salaries.		
General Fund,	$1,048.02	
Benjamin Bussey Professorship,	2,134.77	
Parkman Professorship,	909.71	
John Hancock "	341.25	
Samuel Dexter,	1,151.90	
Henry Lienow,	521.71	
Mary P. Townsend,	298.20	
Winthrop Ward,	119.28	
Samuel Hoar,	59.64	
Abraham W. Fuller,	59.64	
Caroline Merriam,	59.64	
Joseph Baker,	447.30	
Thomas Tileston of New York Endowment,	568.00	
New Subscription,	426.28	8,145.34
Income of Scholarship Funds.		
Thomas Cary,	309.62	
George Chapman,	123.08	
Joshua Clapp,	153.64	
Jackson Foundation,	714.03	
J. Henry Kendall,	159.61	
Nancy Kendall,	151.43	1,611.41
Income of other Funds.		
Joshua Clapp,	123.71	
William Pomeroy,	59.64	
Hannah C. Andrews,	29.82	
Lewis Gould,	51.74	
Interest on Beneficiary money returned,	76.62	341.53
Term Bills.		
For Instruction,	1,066.67	
For Rents and Furniture,	1,602.25	2,668.92
Benjamin Bussey Trust. One-fourth of net income for use of this School,		2,556.67
		$15,323.87

PAYMENTS.

For Salaries for Instruction,	$14,250.00
Beneficiaries and services of students,	150.00
Labor, repairs, and improvements,	341.47
Cleaning and care of rooms,	515.48
Books,	100.00
Printing,	136.50
Fuel,	184.18
Gas,	74.78
Stationery, postage, and sundries,	16.87
Water rates,	25.00
Amount carried forward,	$15,794.28

Table IV., continued.

PAYMENTS.

Amount brought forward, . . .	$15,794.28	
Diplomas, ...	.90	
Insurance, ...	117.50	
Collation, ...	75.00	15,987.68
Paid the incumbents of the following Scholarships.		
Jackson Foundation, ...	780.00	
Cary, ...	350.00	
Chapman, ...	186.66	
Nancy Kendall, ...	140.00	
J. Henry Kendall, ...	140.00	
Joshua Clapp, ...	125.00	1,721.66
		$17,709.34

Table No. V.

LAW SCHOOL.

RECEIPTS.

Income of the following funds.		
Law School Balance, ...	$578.00	
Nathan Dane, ...	894.60	
Benjamin Bussey Professorship, ...	1,362.06	
Isaac Royall, ...	473.77	
Benjamin Bussey Trust (½ of net income for use of this School), ...	2,556.67	
		5,865.10
Term Bills for Instruction, ...		20,925.04
For books sold from Library, ...		15.00
		$26,805.14

PAYMENTS.

For Salaries for Instruction, ...	$22,500.00	
Librarian and Assistants, ...	2,839.34	
Janitor, ...	280.00	
Books, ...	1,971.32	
Binding, ...	386.75	
Cleaning, ...	639.54	
Diplomas, ...	6.70	
Fuel, ...	364.06	
Gas, ...	278.06	
Printing	367.25	
Scholarships, ...	1,050.00	
Labor, repairs, and improvements, ...	245.47	
Stationery and postage, ...	118.73	
Insurance, ...	100.00	
Freight, ...	56.36	
Advertising, ...	30.00	
Sundries, ...	54.48	
Gas regulator, ...	40.00	
Water rates, ...	34.09	$31,362.15

TABLE No. VI.

MEDICAL SCHOOL.

RECEIPTS.

Income of the following Funds.			
Medical School, balance,		$1,498.44	
Jackson Medical,		1,090.16	
Warren, for Anatomical Museum,		606.11	
Ward Nicholas Boylston, for Medical Prizes,		234.81	
Ward Nicholas Boylston, for Medical Books,		104.23	
George C. Shattuck. Interest,	394.87		
From special investment,	490.00	884.87	
Hersey Professorship, two-fifths income of the fund,		443.13	
Medical Library Fund,		120.93	
Medical School Building Fund,		1,546.83	
Quincy Tufts,		120.91	
John Foster (income for Medical students every third year),		180.17	6,830.64
From students for instruction,		51,611.73	
" " for graduation fees,		1,980.00	
" " in Chemical Laboratory, breakage and chemicals,		1,521.*75*	
" " in Practical Anatomy, for material,		418.00	55,531.48
			$62,362.12

PAYMENTS.

Boylston Medical Prizes. Advertising,	116.00	
Warren Anatomical Museum.		
Expenses, and additions to collection,	349.48	
Swett Laboratory of Physiology. Apparatus,	108.80	
Chemical Laboratory, apparatus, chemicals, and wages,	1,687.16	
Physiological Laboratory Expenses,	400.00	
Practical Anatomy and Surgery Expenses,	1,357.86	
Microscopy Expenses,	57.30	
Obstetrics "	328.39	
Histology "	12.24	
Salaries for instruction,	31,715.52	
Repairs and improvements,	782.18	
Scholarships,	800.00	37,714.93
General Expenses.		
Advertising and catalogues,	959.85	
Alcohol,	25.05	
Books from Library Fund,	5.00	
Cleaning,	205.48	
Clerk,	700.00	
Diplomas,	41.25	
Doorkeeper,	90.00	
Fuel,	453.72	
Gas,	518.43	
Insurance,	250.00	
Amounts carried forward,	$3,248.78	$37,714.93

TABLE VI., CONTINUED.

PAYMENTS.

Amounts brought forward, ...	$3,248.78	$37,714.93
Janitor, ...	1,200.00	
Legal Services, ...	101.00	
Librarian, ...	20.00	
Printing, ...	102.36	
Rent of rooms for Chemical Laboratory, ...	500.00	
Stationery, postage, and sundries, ...	196.91	
Water rates, ...	104.89	5,473.94
		$43,188.87

TABLE No. VII.

DENTAL SCHOOL.

RECEIPTS.

From Students, ...	$2,200.00	
Infirmary, ...	577.31	
Laboratory, ...	218.50	
Rent of a part of the School building, ...	282.50	
		$3,278.31

PAYMENTS.

Advertising and catalogues, ...	$140.03	
Care of operating room at hospital, ...	75.00	
Drugs, chemicals, and sundries, ...	61.59	
Diplomas, ...	10.48	
Fuel, ...	97.05	
Gas, ...	18.65	
Gold foil and metals, ...	264.40	
Insurance, ...	68.00	
Instruments and apparatus, ...	105.44	
Interest on debt, ...	993.89	
Printing, ...	22.50	
Repairs to building, ...	70.10	
Salaries for instruction, ...	1,004.00	
Stationery and postage, ...	34.50	
Taxes, ...	112.64	
Water rates, ...	12.00	
		$3,090.27

TABLE No. VIII.

LAWRENCE SCIENTIFIC SCHOOL.

RECEIPTS.

Income of the following Funds.	
Professorship of Engineering, ...	$2,204.24
Professorship of Chemistry, ...	162.50
Amount carried forward, . . .	$2,366.74

TABLE VIII., CONTINUED.

RECEIPTS.

Amount brought forward,		$2,366.74	
James Lawrence. From special investment,		3,000.00	
Abbott Lawrence,		3,495.24	
Gray Fund for Zoölogical Museum. From special investment,		2,750.00	
John B. Barringer. Interest,	1,334.06		
From special investment,	200.00		
		1,534.06	
Sturgis Hooper. Interest,		2,840.00	
Agassiz Memorial. Interest,	15,933.31		
From special investment,	1,008.16		
		16,941.47	
Teachers and Pupils,		431.34	
Humboldt,		439.69	
Permanent Fund for Museum of Zoölogy,		6,672.24	
			40,470.78
Advances by Alexander Agassiz, Esq., to the Building Fund,			8,000.00
Term Bills, for Instruction,			2,540.00
			$51,010.78

PAYMENTS.

Paid on the order of the Faculty of the Museum of Comparative Zoölogy, from the following Funds.		
Gray,	$2,750.00	
Agassiz Memorial,	14,754.40	
Teachers and Pupils,	431.34	
Humboldt,	439.69	
Permanent,	6,672.24	
Agassiz Building Fund,	14,839.06	
		39,886.73
Salaries for instruction,	13,695.24	
Books, Engineering Department,	200.00	
Instruments and apparatus,	30.00	
Printing,	7.81	
Fuel,	250.50	
Gas,	17.74	
Stationery and postage,	17.71	
Cleaning,	113.50	
Janitor,	480.00	
Labor and repairs,	179.78	
Expenses Chemical Laboratory (part),	234.06	
Scholarships,	400.00	
Interest on advances,	497.32	
Diplomas,	1.35	
Insurance,	108.00	
		16,233.01
		$56,119.74

TABLE No. IX.

OBSERVATORY.

RECEIPTS.

Income of the following Funds.		
Edward B. Phillips,	$6,264.70	
James Hayward,	1,192.80	
David Sears,	1,141.79	
Josiah Quincy,	598.44	
James Savage (½ of net income),	1,042.80	
Charlotte Harris,	113.60	
		10,354.13
New Subscriptions,		11,455.00
United States Coast Survey,	861.00	
From sale of time signals,	2,837.50	
" " " wood, grass, &c.	107.30	
		3,805.80
		$25,614.93

PAYMENTS.

Salaries and wages,	$11,235.14	
Cleaning and care of Observatory,	284.42	
Gas,	79.46	
Instruments and apparatus, including repairs on same,	701.67	
Repairs and improvements on buildings and grounds,	666.67	
Stationery and postage,	213.57	
Fuel,	70.31	
Books,	154.58	
Binding,	87.40	
Water rates,	14.00	
Printing,	82.80	
Expenses of time service for 1878-79,	1,270.49	
Freight,	88.92	
Trustees for Mrs. Winlock, ½ net income from sale of time signals,	783.50	
Chemicals and sundries,	28.20	
Watering streets,	22.50	
Furniture,	327.56	
Insurance,	224.00	
		$16,335.19

TABLE No. X.

BUSSEY INSTITUTION.

RECEIPTS.

From **Bussey** Trust (½ net income),	$5,113.35	
From **Bussey** Building Fund (net income),	1,493.24	
Fees for Instruction,	470.50	
Sale of Bulletins,	12.60	
From **Arnold** Arboretum for rent of greenhouses,	100.00	
		$7,189.69

TABLE X., CONTINUED.

PAYMENTS.

For Salaries,	12,500.00	
Books,	88.55	
Stationery and postage, cleaning, gas, &c.,	65.71	
Fuel,	189.00	
Wages,	305.87	
Water supply, expenses,	74.10	
Printing,	25.40	
Horticultural Department, expenses,	420.52	
Repairs and improvements,	49.66	
Police,	283.34	
Labor and expenses in the Arboretum, from unexpended income of Arnold Fund, 1876-77,	366.34	
Insurance,	270.00	
		$14,638.49

Bussey Building Fund.

Receipts.

Income of unexpended balance of Fund,	$718.24	
Estimated value of use of house by Prof. Storer,	775.00	
		$1,493.24

Payments.

Income carried to Bussey Institution,		1,493.24

James Arnold Fund.

Receipts.

Income of Fund,	$8,382.43	
Gift from Mass. Society for Promoting Agriculture,	1,000.00	
		$9,382.43

Payments.

Salary of Director,	$2,100.00	
Expenses of Arboretum,	1,809.59	
		$3,909.59

TABLE NO XI.

MISCELLANEOUS FUNDS.

Bussey Trust.

Receipts.

Net income from Real Estate,		$17,126.69

Payments.

Annuities,	$6,900.00	
One-half of the remaining income to Bussey Institution,	5,113.35	
One-quarter " " " Divinity School,	2,556.67	
" " " " " Law School,	2,556.67	
		$17,126.69

Gray Fund For Engravings.

Receipts.

Income from special investment,	$782.40	
Interest on balance of Fund,	284.00	
		$1,066.40

Payments.

To the Treasurer of the Museum of Fine Arts,		$1,378.86

Annuity Funds.

Receipts.

Gore, income,	$1,276.07	
Mary Osgood, income,	408.11	
Lucy Osgood, income,	742.60	
Anonymous Observatory, income,	720.00	
Bemis, income,	1,183.31	
		$4,330.09

Payments.

Gore, annuities,	$1,200.00	
Mary Osgood, annuity,	360.00	
Lucy Osgood, annuities,	780.00	
Anonymous Observatory, annuity,	720.00	
		$3,060.00

Daniel Williams Fund.

Receipts.

Interest on Fund,		$916.80

Payments.

Treasurer of Herring Pond Indians,	$323.94	
" " Mashpee Indians,	647.89	
		$971.83

Sarah Winslow Fund.

Receipts.

Interest on Fund,		$275.54

Payments.

Minister at Tyngsborough, Mass.,	$139.27	
Teacher at " "	139.27	
Commission on income credited to University,	7.14	
		$285.68

James Savage Fund.

Receipts.

Interest on Fund,		$2,385.60

Payments.

Scholarship,	$ 300.00	
One-half the remaining income to Library,	1,042.80	
" " " " Observatory,	1,042.80	
		$2,385.60

Gospel Church Fund (accumulating). Interest on Fund,	$115.59

TABLE XI., CONTINUED.

Suspense Account.

Receipts.

Subscriptions for salary of Demonstrator of Zoölogy at Bussey Institution for 1879–80, ...	$150.00	
Subscriptions for a Pension system, to be returned by a vote of the Corporation, ...	690.00	
		$840.00

Sever Hall Building Fund.

Receipts.

Income from special investment, ...	$2,480.21	
Interest on balance of Fund, ...	47.20	
		$2,527.41

Payments.

On account of Architectural services and contracts for building, ...	$16.727.57	
Interest charged on advances, ...	159.60	
		$16,887.17

Insurance and Guaranty Fund.

Receipts.

Gain on sale of $35,000 Burl. & Mo. River R. R. Bonds,	$4,385.00	
" " " " 5,000 Lawrence City Bonds, ...	87.50	
" " " " 3,000 Brookline Town "	198.75	
" " " " 14,000 Cambridge City "	106.25	
" " " " 20,000 Hartford " "	1,200.00	
" " " " 26,000 Fall River " "	1,020.00	
" " " " 100,000 District of Columbia Bonds, .	8,837.50	
		$15,835.00

Payments.

Loss on sale of $100,000 United States 6% Bonds, . . .	$1,875.00	
" " " " 27,500 " " " " . . .	4,093.17	
" " " " 45,000 Massachusetts 5% " . . .	562.50	
" " " " 100 shares Boston & Albany R. R. Stock,	1,125.00	
" " " " $3,000 Springfield City Bonds, ...	123.75	
		$7,779.42

Sundry Accounts.

Receipts.

Gain from sale of securities for Graduates' Schol. Fund,	$400.00	
Chinese Subscription, ...	1,000.00	
Advances to Lawrence Scientific School from "General Investments,"	296.97	
		$1,696.97

Payments.

Winn Professorship, paid Unitarian Church of Malden, by order of Supreme Court, ...	$3,000.00	
Advances to Dental School, repaid, ...	188.04	
" " Observatory, "	749.67	
Annuity for Class of 1802, ...	170.00	
Expenses of Chinese Instruction, ...	30.05	
		$4,137.76

GENERAL SUMMARY OF THE TABLES.

			Receipts.	Payments.
Table	I.	University,	29,308.94	35,784.44
Table	II.	College,	233,174.48	199,870.94
Table	III.	Library,	12,543.23	31,984.32
Table	IV.	Divinity School,	15,323.87	17,709.34
Table	V.	Law School,	26,805.14	31,362.15
Table	VI.	Medical School,	62,362.12	43,188.87
Table	VII.	Dental School,	3,278.31	3,090.27
Table	VIII.	Lawrence Scientific School,	51,010.78	56,119.74
Table	IX.	Observatory,	25,614.93	16,335.19
Table	X.	Bussey Institution,	7,189.69	14,638.49
		Bussey Building Fund,	1,493.24	1,493.24
		James Arnold Fund,	9,382.43	3,909.59
Table	XI.	Bussey Trust,	17,126.69	17,126.69
		Gray Fund for Engravings,	1,066.40	1,378.36
		Annuity Funds,	4,330.09	3,060.00
		Daniel Williams Fund,	916.80	971.83
		Sarah Winslow Fund,	275.54	285.68
		James Savage Fund,	2,385.60	2,385.60
		Gospel Church Fund,	115.59	
		Suspense Account,	840.00	
		Insurance and Guaranty Fund,	15,835.00	7,779.42
		Sundry Accounts,	1,696.97	4,137.76
		Sever Hall Building Fund,	2,527.41	16,887.17
			524,603.25	509,499.59
			509,499.59	
			$15,103.66, balance,	

Which is the net increase of the Funds for the year 1878–79, excluding gifts for capital account, as also shown on page 25.

Certificate of the Joint Committee of the Corporation and Overseers of Harvard College, for examining the Books and Accounts of the Treasurer entered in the Journal kept by him.

We, the undersigned, a joint committee of the Corporation and Overseers of Harvard College to examine the books and accounts of the Treasurer for the year ending August 31, 1879, have examined and audited the Cash book from pages 2 to 39, inclusive, and have seen that all the bonds, notes, mortgages, certificates of stock, and other evidences of property, which were received by him and on hand at the beginning of said year, are now in his possession, or are fully accounted for by entries made therein. We have also noticed all payments, both of principal and interest, indorsed on any of said bonds or notes, and have seen that the amounts so indorsed have been duly credited to the College.

We have carefully examined all notes, bonds, mortgages, and other securities invested during the said year, and are of opinion that all such investments have been judiciously made and are amply secured.

We have in like manner satisfied ourselves that all the entries for moneys expended by the Treasurer, or charged in his books to the College, are well vouched; such of them as are not supported by counter entries being proved by regular vouchers and receipts.

The Committee have also seen that all the entries for said year are duly transferred to the Ledger, and that the accounts there are rightly cast, and the balances carried forward correctly to new accounts.

(Signed,)

JOHN QUINCY ADAMS, ALEXANDER AGASSIZ,	*Committee on the part of the Corporation.*
LEVERETT SALTONSTALL, ISRAEL M. SPELMAN, GEORGE B. CHASE, AMOS A. LAWRENCE, NATHANIEL SILSBEE.	*Committee on the part of the Board of Overseers.*

Boston, Dec. 23, 1879.

ANNUAL REPORTS

OF THE

PRESIDENT AND TREASURER

OF

HARVARD COLLEGE.

1879-80.

BIBLIOTHECA
MAR 1881
BODLEIANA

CAMBRIDGE:
UNIVERSITY PRESS: JOHN WILSON AND SON.
1881.

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1879-80.

CAMBRIDGE:
UNIVERSITY PRESS: JOHN WILSON AND SON.
1880.

PRESIDENT'S REPORT FOR 1879-80.

To the Board of Overseers:—

The President of the University has the honor to submit the following Report for the academic year 1879–80; namely, from September 25, 1879, to September 30, 1880.

Although Louis François de Pourtalès, Keeper of the Museum of Comparative Zoölogy, who died on the 17th of July, 1880, in the fifty-seventh year of his age, held his place by appointment of the Faculty of the Museum and not by appointment of the Corporation and Overseers, his remarkable capacity, industry, and success as a naturalist, and his indefatigable labors on behalf of the Museum, demand honorable and grateful mention in this Report. He was a model of the modest, devoted, patient, and disinterested man of science.

RESIGNATIONS.

Edward P. Usher, Proctor, October 6, 1879.

William J. Nichols, Proctor, October 6, 1879.

Charles H. Wiswell, Proctor, October 6, 1879.

Nathaniel W. Hawes, Assistant Professor of Operative Dentistry, October 6, 1879.

Charles B. Witherlee, Proctor, November 24, 1879.

John H. Appleton, Proctor, December 29, 1879.

Leonard Waldo, Assistant in the Observatory, January 26, 1880.

Edward J. Young, Professor of Hebrew and other Oriental Languages, February 9, 1880.

William G. Hale, Tutor in Latin, September 13, 1880 (accepted as of August 31, 1880).

Hollis R. Bailey, Proctor, September 29, 1880.

Alfred W. Field, Proctor, September 29, 1880.

Eugene Wambaugh, Proctor, September 29, 1880.

Robert S. Avann, Proctor, September 29, 1880.

Alphonso M. Weeks, Proctor, September 29, 1880.

Dr. Hawes, who resigned an assistant-professorship in the Dental School early in the year, had generously rendered a gratuitous service to the School for nine years. Professor Young, who resigned the Hancock Professorship and Dexter Lectureship at the close of the year, has returned to the ministry, after having given eleven years to the service of the University. Tutor Hale resigned to accept a Professorship at the Cornell University.

APPOINTMENTS.

[UNLIMITED, OR FOR TERMS LONGER THAN ONE YEAR.]

George L. Goodale, to be Director of the Botanic Garden, October 6, 1879.

Reginald H. Fitz, to be Shattuck Professor of Pathological Anatomy, November 10, 1879.

Frederick De Forest Allen, to be Professor of Classical Philology, May 31, 1880.

Charles R. Lanman, to be Professor of Sanscrit, May 31, 1880.

Crawford H. Toy, to be Professor of Hebrew and other Oriental Languages, May 31, 1880.

John Trowbridge, to be Professor of Physics, June 14, 1880.

Charles J. White, to be Assistant Professor of Mathematics for five years from September 1, 1880, June 28, 1880.

Charles A. Brackett, to be Assistant Professor of Dental Therapeutics for five years from September 1, 1880, June 28, 1880.

Thomas Dwight, to be Instructor in Topographical Anatomy, June 30, 1880.

William Gardner Hale, to be Tutor in Latin for three years from September 1, 1880, July 12, 1880.

William Cranston Lawton, to be Proctor, October 6, 1879.

Henry Gilman Nichols, to be Proctor, October 6, 1879.

Edward Emerson Phillips, to be Proctor, October 6, 1879.

Henry Burleigh Wenzell, to be Proctor, October 27, 1879.

Charles M. Barnes, to be Proctor, December 29, 1879.

Arthur Percy Cushing, to be Proctor, February 9, 1880.

Oliver Clinton Wendell, to be Assistant in the Observatory, March 8, 1880.

John Robinson, to be Assistant at the Arboretum, May 31, 1880.

[FOR ONE YEAR OR LESS.]

For 1879-80.

William Sturgis Bigelow, to be Assistant in Surgery, October 6, 1879.

Nathaniel Dana Carlile Hodges, to be Assistant in Physics, October 6, 1879.

William Harlow Melville, to be Assistant in Mineralogy, October 6, 1879.

Charles Frederic Mabery, to be Assistant in Chemistry, October 6, 1879.

Robert Willard Greenleaf, to be Assistant in Botany, October 6, 1879.

Clement Walker Andrews, to be Assistant in Organic Chemistry, October 6, 1879.

John Fleming White, to be Assistant in Chemistry, October 6, 1879.

Frank Waldo, to be Assistant in the Observatory, October 6, 1879.

Harry Blake Hodges, to be Instructor in Chemistry and German, October 6, 1879.

George Holmes Howison, to be Lecturer on Ethics, October 6, 1879.

A. Lawrence Mason, to be Clinical Instructor in Auscultation and Percussion, November 10, 1879.

Frederick C. Shattuck, to be Clinical Instructor in Auscultation and Percussion, November 10, 1879.

Gustavus E. Gordon, to be Lecturer on Charitable Methods, December 29, 1879.

Charles B. Elder, to be Librarian at the Divinity School, October 27, 1879.

For 1880-81.

Joseph Henry Allen, to be Lecturer on Ecclesiastical History, June 14, 1880.

Charles Pickard Ware, to be Instructor in English, June 14, 1880.

Thomas Sergeant Perry, to be Instructor in English, June 14, 1880.

Henry Grosvenor Carey, to be Instructor in Vocal Music, June 14, 1880.

Howard Malcolm Ticknor, to be Instructor in Elocution, June 14, 1880.

Isaac Theodore Hoague, to be Instructor in the Constitutional History of the United States, June 14, 1880.

Edward Laurens Mark, to be Instructor in Zoölogy, June 14, 1880.

James Lawrence Laughlin, to be Instructor in Political Economy, June 14, 1880.

Giorgio Analecto Corrado Bendelari, to be Instructor in Modern Languages, June 14, 1880.

Harry Blake Hodges, to be Instructor in German, June 14, 1880.

George Riddle, to be Instructor in Elocution, June 14, 1880.

Nathaniel Dana Carlile Hodges, to be Assistant in Physics, June 14, 1880.

William Harlow Melville, to be Assistant in Mineralogy, June 14, 1880.

Charles Frederic Mabery, to be Assistant in Chemistry, June 14, 1880.

Robert Willard Greenleaf, to be Assistant in Botany, June 14, 1880.

John Fleming White, to be Assistant in Chemistry, June 14, 1880.

Clement Walker Andrews, to be Assistant in Chemistry, June 14, 1880.

Leonard P. Kinnicutt, to be Assistant in Chemistry, June 14, 1880.

Charles Henry Morss, to be Assistant in Biology, June 14, 1880.

Charles Follen Folsom, to be Lecturer on Mental Diseases, June 14, 1880.

Frank Winthrop Draper, to be Lecturer on Forensic Medicine, June 14, 1880.

Charles Sedgwick Minot, to be Lecturer on Embryology, June 14, 1880.

Francis Boott Greenough, to be Clinical Instructor in Syphilis, June 14, 1880.

Samuel Gilbert Webber, to be Clinical Instructor in Diseases of the Nervous System, June 14, 1880.

Edward Wigglesworth, to be Clinical Instructor in Syphilis, June 14, 1880.

Clarence John Blake, to be Clinical Instructor in Otology, June 14, 1880.

John Orne Green, to be Clinical Instructor in Otology, June 14, 1880.

James Jackson Putnam, to be Clinical Instructor in Diseases of the Nervous System, June 14, 1880.

Joseph Pearson Oliver, to be Clinical Instructor in Diseases of Children, June 14, 1880.

Thomas Morgan Rotch, to be Clinical Instructor in Diseases of Children, June 14, 1880.

Amos Lawrence Mason, to be Clinical Instructor in Auscultation and Percussion, June 14, 1880.

Frederick Cheever Shattuck, to be Clinical Instructor in Auscultation and Percussion, June 14, 1880.

Henry Parker Quincy, to be Assistant in Histology, June 14, 1880.

Thomas Waterman, to be Assistant in Anatomy, June 14, 1880.

Edward Newton Whittier, to be Assistant in Clinical Medicine, June 14, 1880.

Elbridge Gerry Cutler, to be Assistant in Pathological Anatomy, June 14, 1880.

William Sturgis Bigelow, to be Assistant in Surgery, June 14, 1880.

George Minot Garland, to be Assistant in Physiology, June 14, 1880.

Maurice Howe Richardson, to be Assistant in Anatomy, June 14, 1880.

Henry Howland, to be Instructor in Torts, June 28, 1880.

William Palmer Bolles, to be Instructor in Materia Medica, June 28, 1880.

Franklin Haven Sargent, to be Instructor in Elocution, June 28, 1880.

William Gray, Henry J. Bigelow, and Thomas G. Appleton, to be Trustees of the Museum of Fine Arts for one year from January 1, 1880, November 10, 1879.

There are scattered over the United States about three hundred and sixty institutions called colleges or universities, exclusive of institutions which receive only women. Of these colleges or universities about five ninths, or nearly two hundred, have been organized since 1850; only twenty of them were in existence before this century, and only twenty-eight were in existence in 1820, of which last number twenty-six were distributed over twelve of the thirteen original States. More than one third of these three hundred and sixty institutions charge no tuition-fee or only a nominal one (not over $30 a year); and in this large class are included such institutions as the State Universities of California, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, and Wisconsin, the University and the College of the City of New York, Lehigh University, and Oberlin College. There are, moreover, forty-three agricultural and mechanical colleges (so-called) endowed by the government, the great majority of which charge no tuition-fee. All but five of these last-named institutions have been organized since the Civil War, and those five have been reorganized and amplified. While the population of the United States has probably increased about fivefold in the sixty years between 1820 and 1880, the number of colleges and universities has been multiplied by fourteen. All the old colleges in the original States charged and still charge a tuition-fee; but the principal increase in the number of colleges has been at the West, and it is there that the practice of charging no tuition-fee most obtains. The difficulty of justly estimating the relative standing or merit of these various institutions is very great, particularly for an uneducated man who tries to choose a college for his sons. The names college and university afford no indication of the real grade of the institutions to which they are applied, and the common criterion of price — the rule that the dearest is probably the best — also fails; for some of the institutions which charge very low fees, or none, are better than some which charge higher fees.

It is an interesting inquiry, how Harvard University, which derives the greater part of its support from tuition-fees, has borne this great change of circumstances since 1820, — how it has sustained the competition of hundreds of new institutions, many of which offer free tuition, — how it has been affected by the settlement of the Western States and Territories, and the consequent transfer of population and capital from the Atlantic coast to the great lakes and river-valleys, and to the Pacific coast; by the temporary alienation and impoverishment of the Southern States; and by the relatively slow increase of population in New England. Is the College proper, or the University as a whole, more of a New England institution or less than it was in 1850 and in 1820? From what parts of the country do its students come? Is it gaining or losing ground at the West, where colleges of low tuition-fee abound? The following tables I., II., and III. furnish explicit answers to some of these questions, and supply data which go far to answer the principal inquiry. There will also be found in the Appendix (I.) a detailed statement of the residences of the students of the University for the year 1880–81.

It appears from these tables that the resort to the College and to the University as a whole, has grown wider during the past sixty, and particularly during the past fifteen years; that the percentage of students from outside New England

I. RESIDENCES OF STUDENTS IN 1820-21, 1850-51, AND 1880-81.

1820-21.

	NUMBER.			PER CENT.
	College.	Medical.	Other Departments.	College.
Massachusetts	191	48	Residences not given in the Catalogue.	66.8
New England	225	53		78.6
Middle States	7	1		2.4
Southern States	52	0		18.2
Western States	0	0		0.0
Elsewhere	2	0		0.7
	286	54	46	

1850-51.

	NUMBER.						PER CENT.	
	College.[*]	Divinity.	Law.	Medical.	Scientific.	University.	College.	University.
Massachusetts	226	14	35	69	36	380	76.3	63.7
New England	246	19	42	100	41	448	83.1	75.2
Middle States	22	1	17	5	6	51	7.4	8.6
Southern States	19	2	32	2	9	64	6.4	10.7
Western States	7	0	6	0	2	15	2.3	2.6
Elsewhere	2	1	1	10[†]	4	18	.7	3.
	296	23	98	117	62	596		

[*] Including 3 resident graduates.

[†] Mainly from the British Provinces.

1880-81.

	NUMBER.					PER CENT.				
	College.	Law.	Medical.	Other Dep'ts.	Total.	College.	Law.	Medical.	Other Dep'ts.	University.
Massachusetts	509	77	176	74	836	61.5	49.3	73.	56.	61.5
New England	575	96	221	86	978	69.5	61.5	91.7	65.3	72.1
Middle States	137	17	5	19	178	16.5	10.9	2.	13.5	13.
Southern States ...	28	12	5	1	46	3.3	7.7	2.	1.5	3.4
Western States	82	25	6	17	130	10.	16.	2.6	12.8	9 6
Other Places	6	6	4	9	25	.7	4.	1.8	6.8	1.8
	828	156	241	132	1357					

II COMPARATIVE STATEMENT OF THE RESIDENCES OF STUDENTS IN 1820, 1850, 1880.

	COLLEGE.						UNIVERSITY.			
	NUMBER.			PER CENT.			NUMBER.		PER CENT.	
	1820-21.	1850-51.	1880-81.	1820-21.	1850-51.	1880-81.	1850-51.	1880-81.	1850-51.	1880-81
Massachusetts	191	226	509	66.8	76.3	61.5	380	836	63.7	61.5
New England	225	246	575	78.6	83.1	69.5	448	978	75.2	72.1
Middle States	7	22	137	2.4	7.4	16.5	51	178	8.6	13.
Southern States	52	19	28	18.2	6.4	3.3	61	46	10.7	3.4
Western States	0	7	82	—	2.3	10.	15	130	2.6	9.6
Other Places	2	2	6	0.7	.7	.7	18	25	3.	1.8
	286	296	828				596	1357		

III. RESIDENCES OF COLLEGE STUDENTS AT FOUR DATES COMPARED.

	NUMBER.				PER CENT.			
	1865-66.	1870-71.	1875-76.	1880-81.	1865-66.	1870-71.	1875-76.	1880-81.
Massachusetts	296	399	488	509	71.	66.	63.	61.5
New England	335	449	542	575	81.	74.	70.	69.5
Middle States	40	82	131	137	10.	14.	17.	16.5
Southern States	10	16	23	28	2.	3.	3.	3.3
Western States	25	47	70	82	6.	8.	9.	10.
Other Places	3	14	10	6				.7
	413	608	776	828				

has increased; that the resort from the Southern States has fallen off, but that the increased resort from the Middle and Western States has more than made good this loss; that the Medical School is, as it has always been, essentially a New England School; and that the resort to the Law School has somewhat narrowed of late, chiefly in consequence of a loss of students from the Southern and Middle States. The last fact is more distinctly brought out in the following table: —

RESIDENCES OF LAW STUDENTS AT FOUR DATES COMPARED.

	NUMBER.				PER CENT.			
	1865-66.	1870-71.	1875-76.	1880-81.	1865-66.	1870-71.	1875-76.	1880-81.
Massachusetts	52	57	69	77	29.4	37.	43.	49.3
New England	78	83	82	96	44.1	54.	51.	61.5
Middle States	27	26	15	17	15.2	17.	09.	10.9
Southern States	24	7	11	12	13.5	05.	07.	07.7
Western States	43	33	38	25	24.3	21.	24.	16.
Other Places	5	5	15	6	3.	03.	09.	4.0
Total	177	154	161	156				

There are very good reasons, partly external and partly internal, for this exceptional, and probably temporary, tendency in the Law School. Since 1850 thirty-one new law schools have been established in the United States, the whole number previously existing having been but nine; and since 1870 the required term of residence at the Harvard Law School has been doubled, an entrance examination has been enforced, and comprehensive and rigorous examinations for the degree have been instituted. It will be noticed in Table III. that the period of most rapid growth in the college was from 1865 to 1875. An increase of nearly fifty per cent in the college tuition-fee was announced in 1868, and took effect in 1869; and the fees of the other departments of the University were advanced only a little later.

So far then as the experience of a single institution may be accepted as a guide, it is to be inferred from the facts given above that a considerable tuition-fee will not prove a bar to the gradual building up of a university of national resort; that the great extent of the country presents no obstacle to such an undertaking; and that the matters of primary importance with reference to the growth of the University are excellent and abundant instruction, ample libraries, rich collections, good apparatus, an atmosphere created by a vigorous and cultivated society, and the presence of eminent scholars, who command the respect, and direct upon the institution the attention, of all educated people. The segregation within State limits, or any other narrow bounds, of the young men receiving university instruction would be a grave calamity for the United States; for the association and education in common of young men taken from all parts of the country is one of the strongest of national bonds. It is much to be wished that universities may grow up in the Western and Southern States, as well as in the Eastern, strong enough to attract students from all parts of the country, and that the German practice of migrating from one university to another may take root here.

The number of students in the College, and in the University as a whole, has not increased much during the past five years, whereas in the preceding ten years the increase was rapid. This temporary arrest of growth is by no means peculiar to this university, but has been experienced by the New England colleges in general,[1] and is probably due chiefly to the severe depression of business which lasted from the autumn of 1873 to the autumn of 1879. Other causes for which the government of the University is responsible have, however, conspired to restrict the growth of all the professional schools of the University within this period, such as the institution of admission examinations, the lengthening of the periods of residence, and the enforcement of thorough examinations for degrees. In the college proper, on the other hand, the Faculty has had no intention of raising the standard either of admission or graduation; nevertheless the gradual introduction between 1875 and 1880 of a new and better method of testing the fitness of candidates for admission may have had some tendency to discourage teachers from presenting their pupils, or intending candidates from applying for examination.

Many new methods of giving instruction, of awakening interest, or enforcing attention on the part of the students, and of testing their progress, have been tried in the various departments of the University during the past ten years.

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[1] In the following table the numbers of students in the ten institutions which belong to the Association of Colleges in New England are compared for the years 1875–76 and 1880–81. There are not so many students now in these institutions taken together as there were five years ago.

	Number of Students.	
	1875–76.	1880-81.
Harvard University	1278	1364
Yale College	1051	1037
Brown University	255	247
Dartmouth College	479	429
Williams College	170	227 *
Trinity College	75	100
Amherst College	388	339
Wesleyan University	176	168
Tufts College	95	96
Boston University	627	510 †
Total	4544	4512

* This increase is simultaneous with the practical abandonment of admission examinations.

† For 1879–80. The Year-book is published in March.

Custom permits to each instructor great liberty in the choice of his methods; and so effectually has this liberty been used that in the same department of instruction — such as history, law, German, or philosophy — it has not been uncommon to find several different, and perhaps discordant, methods simultaneously in operation. The inventive activity of the instructors has undoubtedly been stimulated by the gradual abolition throughout the University of all disciplinary methods of enforcing the attendance of the students at lectures and recitations. The student now goes to the lecture-room because he is interested in the work done there; or because it is easier to accomplish the prescribed work of the course with the daily help of the instructor than in any other way; or because he finds attendance indispensable if he would pass the stated examinations; or, finally, because he is urged to attend by his friends, his parents, or the officers of the University, on the ground that attendance is both an advantage to him and a duty. If it can be reasonably maintained by the student that attendance upon the exercises of any professor is not interesting, or as profitable towards a knowledge of the subject as some other use of the same time, or indispensable for passing the examinations of the course, every inducement to attendance seems to fail; and even the parent or the friend who wishes to urge the student to attend the exercises of that instructor will have serious difficulty in giving good reasons for such advice. It follows that in all departments the instructors have felt prompted anew to make their exercises interesting, profitable, and indeed indispensable, to their students. Within the same period, a thorough system of stated written examinations, as tests of the students' attainments and progress, has been elaborated and applied throughout the University. As well-conducted periodical examinations lead students to work hard during the examination periods, and to relax their exertions when no such crisis is imminent, the instructors, recognizing this inevitable tendency and feeling the importance of keeping the students up to their daily work, have been diligent in devising means to enforce the regular performance of the work which they give out from day to day. Again, the elective system, which prevails in the college and to some degree in the Law School and the Medical School, has also a tendency to make every instructor desirous of adopting the most interesting and effective method of teaching his subject, lest, in the multitude of courses open to the student's choice, his subject should be neglected.

For these various reasons, many modifications of the simple recitation and the simple lecture of former times have been lately introduced. The main objections to the recitation, at which the students simply recite a lesson previously set in a book, are, that good scholars who have learned the lesson well, and could recite it readily, get little or no instruction from the exercise, and that the teacher examines rather than teaches; the objections to the simple lecture are, that the hearers are too often listless, and at the best completely passive, and that there is no opportunity of meeting their difficulties or enforcing the instruction given. The recitation, considered as an opportunity of examining a student to see whether he has learned the lesson of the day, and to give him a mark of merit or demerit, has well-nigh disappeared from the University. It has become for the teacher an opportunity to give conversational instruction by asking questions, addressed either to an individual or to the class, with a view to correct misapprehensions and to bring out the main points of the subject clear of the details, by explaining the author in hand, or by contravening, reinforcing, or illustrating his statements: for the student it has become an opportunity to ask questions, to receive, either in a critical or in a docile spirit, the explanations and opinions of the instructor; to review the lesson or re-examine the subject of the day; and to test occasionally his own power of translating, of stating a proposition, a case, an argument, or a demonstration, of narrating a series of events, or of describing a plant, an animal, a disease, a building, a person, or an institution. For teacher and students alike the recitation gives opportunity for personal acquaintance and a somewhat intimate intercourse. In many recitations (so called, perhaps, because a text or treatise affords a basis for the instruction) the teacher does the greater part of the work. Thus, there are recitations in Latin and Greek at which the instructors, and not the students, do all the translating; recitations in history at which the comments and illustrations of the instructor fill almost all the hour; recitations in law at which the instructor is the principal disputant in a discussion intended to elucidate and enforce a legal principle; and recitations in the modern languages at which more than half of the time is devoted by the instructor to explaining, in the language which the class is studying, the difficulties which the students have met with in the reading prescribed for the day.

If, in the recitation as it now exists, there is something of the lecture, on the other hand in the lecture there is, ordinarily, a large admixture of the Socratic method. The lecturer does not read or speak continuously himself, but frequently interrupts his exposition to address a question to an individual or to the class, or to invite the class to ask questions and suggest difficulties. In subjects which deal with chains of reasoning, — like mathematics, logic, and law, — the skilful lecturer may draw from the class by successive questions the whole process of a long argument, getting a step from each student called upon. By asking a sudden question, and subsequently indicating the person who is to answer it, he may keep a large class upon the alert. There are but few courses of lectures in which the students are obliged to rely exclusively on the lectures; in most of the courses in which the instructor, either from necessity or choice, has adopted the lecture method, the students are advised to use a book, or books, for parallel reading, or are required to read specified selections from a variety of books. In many courses, both of lectures and of recitations, the instructors refer the students to a number of printed authorities much greater than the ordinary student can read ; but in such cases the instructors generally indicate the references which they consider essential or most important.

The practice of referring a large class of students to a considerable number of different books or serials not owned by the students, but to be found in one of the libraries of the University, presents grave inconvenience. The number of accessible copies of some of the books being probably but small, a large part of the class may not get seasonable access to the designated reading; moreover, the books themselves are sure to be destroyed in a few years by excessive use upon a number of pages perhaps inconsiderable in proportion to the whole bulk of the volumes. This difficulty presents itself most frequently in the courses upon history, natural history, and law; but in the Law School some of the professors have overcome it by printing collections of the important cases on the subjects of their several courses, with the addition of summaries or elaborate indices. It is a good indirect effect of this method that it facilitates the study of original sources, and thereby tends to emancipate the student from treatises and other second-hand authorities. That this method may prove to be capable of advantageous application in other departments of instruction is much to be wished.

Both in recitations and lectures the practice of taking notes prevails ; but various devices are employed by instructors and students to lighten the labor of note-taking. Some professors place upon the blackboard before the exercise begins the references, titles, tables, or diagrams which they wish the students to copy; others distribute to the class all such matter in manuscript, reproduced in sufficient quantities by some of the cheap copying processes;

and others issue a printed syllabus of their course more or less detailed. One professor gives his students beforehand full notes of all his lectures; and another instructor has lately authorized an advanced student to prepare elaborate notes of his lectures and distribute them in excellent printed form to such of his class as are willing to pay a moderate price for them. These various devices save the time which would otherwise be spent in dictating references, quotations, and abstracts during the lecture itself, and they also prevent in a measure the students' attention from being given to the mechanical operation of rapid writing instead of to the subject-matter of the lecture.

For the purpose of testing the daily or weekly progress of the student, and his faithfulness in keeping up with the work of each of his courses, various processes are used, in addition to the oral questioning which makes part of the regular exercises. In the languages, there are several tests of easy application from which there is no escape; such are translation at sight, writing the foreign language at dictation, and rendering dictated English into the foreign language; in the mathematics, problems connected with the subject in hand may always be given to any or all students; in history, philosophy, and political economy, an essay may be periodically demanded upon some special point, or limited topic, within the student's capacity and not beyond the range of his reading; in clinical medicine, an actual case can always be given to a student to study and report upon; in all the scientific courses, and in some others, each student can be required to give before the class, from time to time, a short lecture upon a suitable subject previously assigned to him; and in the laboratory courses, like those in chemistry, mineralogy, botany, biology, histology, physiology, and zoölogy, actual analyses, determinations, or dissections are sure tests of the student's skill and knowledge. The following simple method is of universal application, but requires much labor on the part of the instructor: At the beginning of the hour, the instructor announces a question or problem connected with the subject of the previous lecture; each student immediately answers the question or solves the problem, in writing, upon a block of paper which he keeps at the lecture-room for this purpose; and at the end of five minutes the answers or solutions are torn from the blocks and handed to the instructor, who then proceeds with his lecture for the day. He subsequently looks over as many of the answers or solutions as he can. All these various methods are in present use in the University; by one or more of them, any instructor can soon make himself acquainted with the quality of all the students who attend his instruction, unless they be exceptionally numerous.

That the recitation method and the lecture method have each some peculiar advantages is to be inferred, both from the long use of the two methods separately and from the present endeavors to combine the two in a single exercise. This exercise, the resultant of the two diverging methods, may perhaps be best described by a word already used in the Theological and Medical Schools and in the graduate department, but not as yet in the other departments,—the word "conference," signifying a meeting for the serious consideration and discussion, under the guidance and criticism of a teacher, of a text, topic, or treatise previously studied. While this form of University exercise more and more prevails, there are still many occasions for the use of the pure lecture method: as, for example, in imparting information which is inaccessible to the students in print,—perhaps because the material is original, or because the sources of information are in a language unknown to them, or because the instructor prefers a novel order of topics, or develops his successive subjects in proportions unlike those of any accessible treatise or text-book,—in giving rapid and elegant translations from other languages into English; and in summing up long descriptions, arguments, narratives, or expositions. The illustrated lecture, though in an abbreviated form, is an essential part of most laboratory courses of instruction; for the students must be shown how to use their tools, to handle specimens, to keep notes, and to observe with accuracy and system. In many courses in natural science, including medicine, a short, descriptive lecture is given at the opening of each laboratory exercise; but in other courses the descriptive lecture is given after, not before, the students have made, under the personal supervision of the instructor, their experiments, observations, or dissections upon the subject or object in hand. Some teachers of science think that students should be told, before they look at a natural object, normal or morbid, what they ought to see; others think that they should first try to see for themselves, and then be told what they ought to have seen. The two methods are good, each for its own end: the first is the quickest way to fix in the memory natural appearances as useful facts; the second, to acquire strong powers of observation. The first is of great use in teaching medicine; the latter, in training naturalists.

The Corporation adopted, on the 31st of May, 1880, new rules with regard to leave of absence for professors and assistant professors. For some years previous to 1869, the practice had been to grant occasional leave of absence, the professor selecting and paying his substitute, but receiving his usual salary. This practice having given rise to serious complaints, and being obviously open to grave objections, the Corporation went to the opposite extreme, and enacted that whenever a professor had leave of absence his salary should stop altogether. Being now satisfied that a more liberal policy will be as much for the interest of the University as for the advantage of the professors, the Corporation have decided that they will grant occasional leave of absence for one year on half-pay, provided that no professor have such leave oftener than once in seven years; that the applications in any one year be reasonable in number, and properly distributed among the different departments; and that the object of the professor in asking leave of absence be health, rest, study, or the prosecution of original work in literature or science.

During the year 1879–80, two plans for providing retiring allowances for University officers were carefully studied by the members of the Corporation, and the professors, assistant professors, and other officers of similar grades. The first plan, which was based upon several existing French systems, provided annuities by means of compulsory annual reserves from salaries, supplemented by equal annual appropriations from the treasury of the University, and accumulated for terms of years which would ordinarily have been long; the second was based upon the English government system, and simply provided a retiring allowance, varying, according to circumstances, from one third to two thirds of the recipient's last annual salary in full activity. The first plan commended itself to a large majority of the instructors; but was opposed, for various reasons, by an influential minority, and at last was rejected by the Corporation, partly because it was not acceptable to all the persons intended to be benefited, and partly because it would have devolved upon the Corporation the constant care of deposits, large in the aggregate, belonging to individuals in their service, liable consequently to taxation and attachment, and conferring upon the owners a right of criticism and complaint touching the financial management of the University such as no individuals now possess. The second plan was simpler, called for no sacrifice of present income on the part of the professors, and laid no new responsibilities upon the Corporation; after being before the professors and assistant professors for several months, and receiving their almost unanimous approval, it was entered upon the records of the Corporation, on the 29th of November, 1880, "for the purpose of exemplifying what the present Corporation, after careful consultation with the present professors and assistant professors, regard as a suitable system" of retiring allowances. The details of the action of the Corporation will be found in the Appendix (II.). In July, 1879, Mr. George Baty Blake sent one thousand dollars to the President and Fellows, as a contribution towards a pension fund; and, in the spring of 1880, a distinguished graduate of the College informed the President that he intended to give ten thousand dollars for that general purpose, whenever the Corporation, after consultation with the professors, should have arrived at a system of administration which commended itself to their judgment. Since the action of the President and Fellows on the 29th of November last, this gentleman has contributed twenty thousand dollars to the "Retiring Allowance Fund." This fund is, therefore, fairly started; and those friends of the University who think that its interests would be greatly subserved by the establishment of a system of retiring allowances, may be assured that contributions for that purpose will be gladly received, and forthwith carried to an accumulating fund.

For the first time there accompanies this Report a report from the Secretary of the Academic Council upon the action of the Council during the year concerning the instruction of graduates, the appointments to fellowships, and the conferring of the degrees of Master of Arts, Doctor of Philosophy, and Doctor of Science. Professor Peirce avails himself of this occasion to give an interesting *résumé* of the successive steps which have been taken in regard to advanced instruction at the University, since the establishment of the Lawrence Scientific School in 1847.

The first appointments to graduate fellowships were made in 1869, when the Harris and the Graduates' fellowships, both of which are in the gift of the College Faculty, became available. In 1874, the Kirkland fellowship and three Parker fellowships, all in the gift of the Academic Council, were established. Since 1878, there have been four Parker fellowships. Twenty-eight persons in all have enjoyed these fellowships, of whom seven are now holding them. Of the remaining twenty-one persons, there are, —

In the service of the University (1 asst. prof., 3 tutors, 3 instructors, 1 assistant at the Museum)	8
Professors in other Universities	2
Instructor in another University	1
Lawyers (2 in Boston, 1 in New York)	3
Minister	1
Assistant in the U. S. Geological Survey	1
Teachers	3
Health impaired	1
Dead	1
Total	21

Beside the eight persons now in the service of the University, four of the others served the College as teachers for periods varying from one year to six.

It was chiefly to strengthen and enrich the department of graduate instruction that the Corporation ventured in May, 1880, upon the creation of two new professorships, — a professorship of classical philology and a professorship of Sanscrit, — calling from Yale College the professor of Greek to fill the first chair, and from the Johns Hopkins University the "Associate" in Sanscrit to fill the second. Simultaneously an eminent scholar in the Semitic languages was appointed to the vacant Hancock professorship. The Corporation expected from these new appointments not only an increase in the quantity and variety of the most advanced instruction in philology, but an increased interest in the whole department of graduate instruction on the part both of teachers and students; and these expectations have not been disappointed. In creating the two new chairs, they deliberately ran some risk of temporarily carrying the annual expenditures of the College above the receipts; but they took this responsibility in the belief that the interests of the College,—the pecuniary interests as well as the higher,—would best be promoted by this action. They were convinced that the prestige of the University was to be maintained and its influence increased, quite as much by amplifying the highest instruction, which is necessarily given to a few, as by improving the lower, which is sought by many. Indeed, they believed that there was no way of strengthening the institution as a whole so sure as that of strengthening and developing it in its highest departments of instruction.

Early in the year the Corporation ordered that no person should be considered a resident graduate after the close of the year 1879–80 unless he was registered as a student in some department of the University. The object of this vote was to insure that the title "resident graduate" should no longer be used to describe merely a graduate who found it convenient to live in Cambridge and use the library for a fee of five dollars (as many do), but should invariably denote a graduate who is actually receiving instruction.

It is interesting to observe from time to time the progress of the professional schools in regard to the previous education of their students. The following tables show how many members of each of the three principal professional schools had received academic degrees in each of the years since the close of the Civil War. About three fifths of the Divinity students, two thirds of the Law students, and nearly one half of the Medical students now hold academic degrees. The Divinity School has recovered from a serious lapse in this respect; the Law School has the best position of the three schools; but the Medical School has made the greatest gain.

NUMBER OF BACHELORS OF ARTS IN THE DIVINITY SCHOOL SINCE 1865–66.

Year.	Number of Students.	Number of Bachelors.	Per Cent.
1865–66	14	10	71.
1866–67	15	6	40.
1867–68	23	8	35.
1868–69	19	5	26.
1869–70	36	5	14.
1870–71	37	9	24.
1871–72	30	11	36.
1872–73	20	6	30.
1873–74	22	12	54.
1874–75	20	9	45.
1875–76	19	11	58.
1876–77	23	12	52.
1877–78	22	14	64.
1878–79	23	17	74.
1879–80	23	15	65.
1880–81	23	13	56.5

NUMBER OF BACHELORS OF ARTS IN THE LAW SCHOOL SINCE 1865–66.

[The degrees of Bachelor of Science, Bachelor of Philosophy, Civil Engineer, and Doctor of Philosophy, are counted as equivalent to that of Bachelor of Arts.]

Year.	Number of Students.	Number of Bachelors.	Per Cent.
1865–66	177	87	49.1
1866–67	115	50	43.5
1867–68	125	56	45.2
1868–69	138	63	45.6
1869–70	120	57	47.5
1870–71	154	69	44.2
1871–72	134	69	51.1
1872–73	113	63	55.8
1873–74	138	84	60.9
1874–75	139	77	55.4
1875–76	161	90	55.9
1876–77	187	110	58.8
1877–78	189	119	63.
1878–79	160	105	65.6
1879–80	165	110	66.6
1880–81	156	109	69 8

In 1877 the course of the Law School was extended to three years, and an examination for admission was required of all who had not received the degree of Bachelor of Arts. Since that time those who do not wish to take the regular course for a degree have been admitted as special students. The proportion of Bachelors of Arts, among the regular and special students respectively, is shown in the following table:—

	Regular Students.	Bachelors.	Per Cent.
1877–78	163	114	70.
1878–79	118	97	82.2
1879–80	127	109	85.8
1880–81	127	105	82.6

	Special Students.	Bachelors.	Per Cent.
1877–78	26	5	19.1
1878–79	42	8	19.
1879–80	38	1	02.6
1880–81	29	4	14.1

NUMBER OF BACHELORS OF ARTS IN THE MEDICAL SCHOOL SINCE 1865–66.

[The degrees of Bachelor of Science, Bachelor of Philosophy, Civil Engineer, and Doctor of Philosophy, are counted as equivalent to that of Bachelor of Arts.]

Year.	Number of Students.	Number of Bachelors.	Per Cent.
1865–66	244	51	20.9
1866–67	303	76	25.
1867–68	330	83	25.
1868–69	308	65	21.1
1869–70	306	68	22.2
1870–71	301	64	21.2
1871–72*	196	55	28.
1872–73	170	50	29.4
1873–74	175	62	35.4
1874–75	192	81	42.1
1875–76	192	78	40.6
1876–77	226	93	41.1
1877–78†	212	88	41.5
1878–79	238	100	41.6
1879–80	251	117	46.6
1880–81	241	115	47.7

* In 1871 the winter and summer sessions were thrown together, and the course extended to fill three years.

† In September, 1877, the first examination for admission was held.

The main work of the College Faculty during 1879–80 was a thorough revision of the regulations. The principal improvements effected were the reduction in the number of enumerated offences and specific prohibitions; the striking out of all regulations which suggested that a certain number of failures, defaults, or transgressions would bring neither reproof nor loss; the modification of the penalty called "dropping;" the adoption of the theory of crediting the student with the work which he has done towards winning the degree, rather than charging him with his deficiencies; and the settlement upon a basis uniform for the whole college of the long-debated questions concerning compulsory or voluntary attendance. In the subjoined Report of the Dean of the College will be found a clear and full exposition of the action taken by the Faculty, and of the views and purposes of that body on these subjects. It must be confessed that the College regulations have been in a state of constant change for eleven years past. Hardly was one change made than another was proposed, and every adjustment seemed only provisional. At last, however, some solid ground seems to have been reached; and it may reasonably be expected that the regulations will remain for a considerable time without fundamental alterations. If any one thinks it strange that it has taken years to bring Harvard College to adopt methods of discipline which younger institutions have no difficulty in adopting in a day, let him consider that every important change in the regulations of an old and large college involves a change of habits for a considerable number of unusually conservative persons, and perhaps an abrupt departure from valued traditions.

In the Report for 1876–77 (p. 27) a table was given which showed the net annual reduction of number in eight classes, beginning with the Freshman class of 1869–70. This table is continued below, and a comparison of the figures concerning the eight classes for which the returns are complete is appended.

	Number.	Loss in per cent from original number.
Class of 1878.		
October, 1874	197	
,, 1875	182	8.
,, 1876	175	11.
,, 1877	168	15.
Recommended for a degree	143	27.4
Class of 1879.		
October, 1875	252	
,, 1876	222	12.
,, 1877	208	17.5
,, 1878	200	20.6
Recommended for a degree	188	25.4
Class of 1880.		
October, 1876	232	
,, 1877	198	14.5
,, 1878	174	25.
,, 1879	171	26.3
Recommended for a degree	161	30.6
Class of 1881.		
October, 1877	239	
,, 1878	218	8.8
,, 1879	201	15.9
,, 1880	195	18.4
Class of 1882.		
October, 1878	227	
,, 1879	196	13.7
,, 1880	186	18.
Class of 1883.		
October, 1879	245	
,, 1880	204	16.7

	No. on entering.	No. rec'd for a degree.	Loss per cent.
Class of 1873	148	130	12.
,, 1874	189	158	16.
,, 1875	194	133	31.
,, 1876	176	135	23.
,, 1877	217	167	23.
,, 1878	197	143	27.4
,, 1879	252	188	25.4
,, 1880	232	161	30.6

The loss exhibited in these tables is the difference between the number of persons who leave the class each year from all causes and the number who are admitted to the class with advanced standing. It represents a serious number of failures in the College career, some from moral infirmity, some from mental incapacity, others from physical disability, and others still from lack of money. The proportional number of failures to graduate at the end of the senior year is not increasing; but the total percentage loss during the four years of the College course is now much larger than it was before 1875. It represents, of course, a serious loss of tuition-fees for the College. The Dean reports that the number of students who left College in 1879-80 on account of pecuniary embarrassments was smaller than in any of the two or three preceding years.

The statements of the Dean concerning the choices of studies made during their college course by the first forty scholars in the class of 1880, and concerning the relative amount of attention given by the three upper classes in 1874-75 and 1879-80 respectively to the different subjects or departments in which instruction was offered, are commended to the attention of all who wish to study the effects of the elective system.

A table of the schools and colleges from which young men actually entered Harvard College from 1871 to 1880 inclusive, with the number that entered from each institution in each year, will be found in the Appendix (III.). As the information upon which this statement is based is not always complete or perfectly accurate, it is probable that it is not free from errors, and particularly it is likely that a few persons have been counted as private pupils who ought properly to have been credited to some school.

In the Report for 1877-78, an estimate was given of the amount of additional endowment which the Divinity School needed in order to maintain five professorships and one instructorship. On the supposition that the Bussey Trust would give the School $4,000 a year, the amount needed was stated to be $127,000. The Bussey Trust yielded only $1,752.64 for the Divinity School in 1879–80; but there is good promise of a substantial increase of income during the current year from the real estate belonging to this Trust. Since the spring of 1879, $140,000 have been contributed for the further endowment of the School without conditions of any sort; and the subscription-list will be found to be unusually interesting because of the great variety of occupation and condition represented among the numerous contributors. It is probable that the Parkman professorship can be filled at the beginning of the ensuing year, provided that a suitable candidate for the chair be found.

In the last annual Report (pp. 22–24), an account was given of the historical relation of the University to theological instruction, and of the efforts made by the Corporation and Overseers in 1852–55 to transfer to other hands their trusts for the support of theological education,— efforts which resulted in an adverse decision of the Supreme Court in November, 1855. The President, in conclusion, cited the opinion of the Court, and being ignorant of the fact, afterwards brought to his knowledge, that there were subsequent proceedings quite equal in importance to those which he had described, he ended the statement with these words: "It is obvious that under these circumstances the Corporation do not, and cannot, regard the question of maintaining theological instruction in the University as an open one. They have too lately been authoritatively instructed as to their duties in that regard." This conclusion was true of the Corporation of 1856, as of the Corporation of 1879, in the obvious sense that they recognized it as their duty, under existing legislation and judicial decisions, to maintain theological instruction; but it was not true in another possible, though unintended, sense,— namely, that the Corporation of 1856 and their successors resigned themselves without farther struggles to the discharge of the theological trusts which they or their predecessors had accepted. On the contrary, accepting the decision of 1855 only as proof that they could not get relief from the Court itself, they shortly took measures to procure from the Legislature an Act to enable them to resign their trusts concerning theological education; and in March, 1858, such an Act was passed and approved. This Act in the first section authorized the Corporation to resign these trusts and in the second section empowered the Supreme Court to appoint another trustee. On the 24th of December, 1858, the President and Fellows by an entry in their records formally resigned the trusts, the resignation to take effect whenever the Supreme Court should, upon the petition of the President and Fellows with the consent of the Board of Overseers, accept such resignation. On the 27th of January, 1859, the Overseers consented to the resignation and to the presentation of a petition to the Court. At the March term, 1859, the petition of the President and Fellows was presented, — a very thorough paper in which the whole case was set forth at length by learned counsel. The Society for promoting Theological Education had been designated, in the Act of 1858 and in the petition of the President and Fellows, as a suitable trustee in their stead; but at the October term, 1859, this Society appeared to protest against the acceptance of the resignation of the President and Fellows, and to show cause why their petition should not be granted. The cause was elaborately argued in June, 1860, by F. C. Loring for the President and Fellows, and Benjamin F. Thomas for the Society. The validity of the Act of 1858 was called in question, and the arguments of counsel taking a wide range, it appeared that the principles involved in the case were far-reaching, and that the responsibility of deciding it would be heavy. Up to 1865 no decision had been made by the Court. On the 9th of September, 1865, the President and Fellows voted to withdraw their petition and discontinue the suit;

and they were finally allowed to do so by the Court: but in March, 1866, they were ordered, after arguments on both sides about the costs, to pay all the costs of the litigation. All these proceedings between 1856 and 1866 were therefore abortive; but the decision of 1855 was by no means the last word upon the subject, as the President supposed when he wrote the sentences quoted above from the Report of 1878–79.

In May last Crawford Howell Toy, LL.D., was elected Hancock Professor of Hebrew and other Oriental languages, and Dexter Lecturer on Biblical Literature in place of Professor Edward J. Young, resigned. Dr. Toy's affiliations were with the Baptist denomination; but he was chosen, without regard to his denominational connection, on the simple ground that he was the most eminent scholar in the Semitic languages to be procured.

The Faculty propose to adhere to the policy of declining to promise pecuniary aid in advance, and of withholding such aid from all but successful students. Their correspondence on this subject shows that the practices of most of the theological seminaries in regard to pecuniary aid are very faulty. The seminaries bid against each other for young mendicants who think that the community owes them a theological education. A surer way to degrade the Protestant ministry, and destroy its influence, could hardly have been devised.

The Law School is safely accomplishing the great change from a two years' to a three years' course of study. In consequence of the progressive diminution in the net income of the Bussey Trust Fund after deducting the annuities (one fourth of which residue comes to the Law School), from $35,349.96 in 1873–74 to $7,010.58 in 1879–80, it has not been possible to fill the vacancy occasioned by the resignation of Judge Bradley at the close of the year 1878–79. The four remaining professors, with the help of an instructor in torts, have given all the instruction of the full three years' course. The School rather more than met its expenses in 1879–80; so that, if the net income of the Bussey Fund recovers in part from its abnormal depression, it will probably be possible to appoint a fifth professor.

Between the year 1869–70 and the year 1879–80, the following changes have been wrought in this School: —

1. Examinations for the degree have been instituted. 2. The period of study for the degree has been lengthened from eighteen months to three years. 3. The tuition-fee has been raised from $100 to $150. 4. An examination for admission has been established. These measures are all restrictive, and it is obvious that the standard of the School must have been greatly raised. In the mean time the number of professors has been permanently increased from three to four (at one time five), a Librarian has been added to the staff of the School, and $34,062.99 have been spent for the increase of the Library. How have these improvements been paid for? The endowment of the School, apart from the Bussey Fund, is very small, and has not been increased since 1869–70. With the exception of the gift of $500 from the late Judge Benjamin R. Curtis for the purchase of books, not a dollar has been given to the School since 1869–70. The following statement shows that the source of the prosperity of the School is the increase of tuition-fees, although the increase in the number of students is only about thirty per cent during the past eleven years: —

	1869–70.	1879–80.
Income from endowment (including one fourth the net income of the Bussey Trust) . . .	$10,154.87	$4,786.15
Receipts from students	11,525.00	23,701.24
Total	$21,679.87	$28,487.39

This department of the University has certainly helped itself: it now deserves to be helped. Its building is inadequate in every respect. There is but one lecture-room, so that two classes have been this year obliged, at great inconvenience, to resort to lecture-rooms which chanced to be temporarily vacant in University Hall; the very valuable Library is exposed to destruction by fire; the situation of the building is such that the lectures are much disturbed by the noise from the streets; and neither professors nor students can be properly accommodated in the Library. A new building upon a new site is urgently needed.

The Medical School has added to Latin and physics, — the subjects of its former examination for admission, — English and any one of the five subjects, French, German, algebra, plane geometry, and botany. The examination for admission was first held in 1877; and its good effects were so soon manifested that the Faculty were ready, after only three years' experience, to add to the requisitions.

A public discussion on the social standing of physicians and surgeons attracted some attention during the past year both in England and in this country. Until very recent years, the medical profession in both these countries was accessible to persons of no academic training whatever, and in the United States it is so still. An American physician or surgeon may be, and often is, a coarse and uncultivated person, devoid of intellectual interests outside of his calling, and quite unable to either speak or write his mother tongue with accuracy. What wonder if under these circumstances the degree of Doctor of Medicine has not heretofore been universally accepted as a passport to refined society? It is notorious that medical students have been as a rule a rougher class of young men than other professional students of similar age. In this University, until the reformation of the School in 1870–71, the medical students were noticeably inferior in bearing, manners, and discipline to the students of other departments; they are now indistinguishable from other students. A corresponding change in the medical profession at large would be effected in twenty years, if all the important medical schools of the country should institute a reasonable examination for admission.

The Medical Faculty adopted, in 1879-80, a plan for a four years' course of study, in preparation for the degree, — a course which they recommend to all students, but do not prescribe. This measure has grave inconveniences; for it makes it necessary to maintain in the School a three years' course and a four years' course at the same time. The four years' course is not made by simply adding another year to the three years' course, but differs from the three years' course in important respects from the beginning of the third year, and differs somewhat even in the second year. Two full years from October, 1880, must therefore elapse before there can be a proper fourth year's class, composed of persons who have planned from the beginning of the second year to remain four years in the School. Again, so long as it is possible to get the degree in three years, some students will crowd their studies into that period, in spite of the advice of the Faculty, to their own disadvantage and the injury of the School. Furthermore, the trouble and cost of maintaining the two courses simultaneously are much greater than the trouble and cost of maintaining the longer of the two courses by itself. Notwithstanding these drawbacks, the Faculty preferred to maintain the three years' course for the present, and to make the adoption of the four years' course optional with the student. They believed that the advantages of the four years' course would be so conspicuous that all the more intelligent students, who were not straitened in their circumstances, would adopt it, and that the School would thus gradually pass from one system to the other without suffering any very serious reduction of numbers. These reasonable anticipations can hardly fail to be realized in due time. The advantages of the four years' course over that of three years are a better distribution of studies, greater thoroughness of treatment on the part of the instructors, less pressure of work upon the students, and, above all, more and better clinical instruction. The Faculty being persuaded that the value of clinical instruction depends very much upon the student's being as near to the patient as the instructor is, and having opportunity to feel, listen, or probe for himself, just as the physician or surgeon does, proposed that the clinical instruction of the fourth year should be given to very small sections; and they are carrying this plan into effect during the current year. A patient placed on a revolving table, and turned slowly round in the focus of a large amphitheatre containing three or four hundred students, supplies, it may be, an interesting illustration for a lecture, but affords the students only very imperfect practice in that acute and accurate observation upon which the correct diagnosis of disease depends. The most valuable clinical instruction is that which two or three students at a time receive from a skilful instructor, who allows them to see, touch, and listen for themselves. If it be said that it is impossible to give such personal instruction in a large school without a great number of clinical instructors, the answer is twofold: first, that the number of clinical instructors ought to be as large as the community can well supply; and, secondly, that the University should be more concerned to have a very good school of medicine than a very large one. The Faculty fully realize that the task to which they have this year addressed themselves is a difficult one; but their experience during the past ten years, in similar attempts to improve medical education, encourages them to expect a favorable issue in their present undertaking. They confidently rely upon the co-operation of intelligent students, and of observant parents who have sons in the School, and upon the support of all the best-educated part of the medical profession.

There will be found in the Report of the Dean of the

Medical School a table, continued from the Report of 1878–79, page 90, which shows how many terms (half-years) had been spent in the School by the graduates of each year from 1872 to 1880, inclusive. The improvement in this respect within nine years is extraordinary. In 1872, only five per cent of the graduates had spent three years in the School, and but fourteen per cent more had spent two years in the School; forty-eight per cent of the graduates had spent only one year in the School, and thirty-two per cent more only a year and a half. In the three years, 1878, 1879, and 1880, eighty-six per cent of the graduates had spent three years in the School, only two graduates out of one hundred and sixty-three had been in the School but one year (and one of these men had previously graduated at another school), and only two others but a year and a half; the rest had been in the School either two years or two years and a half. In these statements, a year means the academic year of nine months. The clinical opportunities and laboratory facilities in a well-situated and well-equipped medical school being much greater than any practitioner can give a private pupil, the table referred to contains strong evidence of rapid improvement in the training which the graduates have received. It would be interesting to get the corresponding facts from some of the other medical schools of the country; but they are never published.

In April last, an admirably situated lot on Boylston and Exeter Streets was bought for the School at a cost of $83,325.00; and the plans of the building to be erected there are now being studied. It is proposed to retain the old building in North Grove Street, and to give there the greater part of the instruction of the third and fourth years of the course, transferring to the new building the departments of anatomy, physiology, chemistry, materia medica, histology, and pathological anatomy, the lectures on surgery, and the Warren Museum. Since 1875, the School has laid up $53,522.32; and of the subscription raised in 1874–75, with its accumulations, there remains, after paying for the site on Boylston Street, about $90,000. To build and furnish the new building and refit the old will doubtless cost more than the remaining balance of the subscription; but the Corporation and Faculty will be loath to see the savings of the past five years consumed in building, so long as the permanent funds of the School remain, as they now are, insignificant in amount ($58,061.94).

The Dental School continues to be maintained by its professors and clinical instructors working without compensation. Its friends are now making an attempt to raise for it the moderate sum of $30,000, to pay off its debt, improve its accommodations, and provide a small fund the income of which would meet its current expenses. There are hundreds of well-to-do persons in this community for whom skilful dentistry has cured pain, maintained or renewed the capacity of enjoying food, prevented premature change of the features, preserved the natural speech, and even prolonged life itself. These are important services which may be very appropriately acknowledged by contributing to the Dental School Fund.

Dr. Arthur T. Cabot having been obliged to resign the position of Instructor in Oral Pathology and Surgery after two years of gratuitous service, the School was so fortunate as to obtain the services of Charles S. Minot, S.D., in that capacity.

In the catalogue for 1879–80, and again in the catalogue of the current year, it was conspicuously stated that persons who are not candidates for a degree may enter the Lawrence Scientific School as special students, at any time, without examination, and avail themselves of its advantages to whatever extent they see fit. The next paragraph in the catalogue stated that students in the Scientific School may, if found competent, pursue any of the courses of instruction given in the other departments of the University, except exercises carried on in the special laboratories, without additional charge. The statement about special students was a revival of an invitation which stood for many years in the announcements of the Scientific School, but which had latterly disappeared in some accidental manner. The succeeding paragraph merely described a special application of a rule which is in force throughout the University. It follows from these two announcements, taken together, that any person may register as a student in the Scientific School, pay the full fee of $150 a year, and take any courses of instruction, in the whole University, which he is competent to pursue. There is no inducement to enter the Scientific School as a special student in order to pursue theological, legal, or medical studies, because special students are admitted directly to those three professional schools; but it is sometimes an object for a young man to gain admission to courses given in the College by registering himself as a Scientific student, since direct admission to the College without examination is only granted to persons twenty-one years of age who are not candidates for a degree (unmatriculated students). By entering the Scientific School as a special student, a person who is not twenty-one years of age may obtain access to College courses of instruction; and there is nothing to prevent such a student from devoting himself wholly to College courses,—to Latin and Greek, for example,—if he can satisfy the instructors whose courses he wishes to attend that he will not be a hinderance in their classes. The number of special students in the School increased slightly in 1879–80, and considerably at the opening of the current year. Among them are a few students whose chief work does not lie in the Scientific School. As it is undesirable that the legitimate practices of one Faculty should enable students to evade the legitimate regulations of another, either the practice of the Scientific Faculty in regard to special students, or the regulations of the College Faculty in regard to unmatriculated students, ought to be reconsidered.

In the spring of 1880, the President and Fellows voted to maintain in the Scientific School, for the benefit of male graduates of the State Normal Schools, scholarships of the annual value of $150 each, not exceeding eight in number at any one time. These scholarships are to be divided among the normal schools in such manner as the State Board of Education may from time to time determine, and the appointments are to be made in the first instance for one year on the recommendation of the principals of the schools. Reappointments are to be recommended by the Scientific Faculty. This action on the part of the Corporation received the approval of the Board of Education, and with their co-operation the first appointment was made at the beginning of the current year.

On October 6th, 1879, George L. Goodale, M.D., Professor of Botany, was appointed Director of the Botanic Garden, in execution of the purpose of the Corporation, formed in the preceding year, to place the administration of the Garden again in the hands of the principal teacher of Botany. Dr. Goodale now presents the first annual Report upon the Garden as a distinct department. It will be observed that considerable gifts have been made to the Garden by old and new friends, and that a beginning has been made towards procuring for it a substantial endowment. The Director estimates that a fund of $80,000 is needed in addition to the existing funds, in order to put the Garden upon a firm foundation. Towards this new endowment, more than $20,000 were subscribed in 1879–80. The Overseers have recognized the importance of the Garden as an aid in giving botanical instruction at the University, as a scientific collection open to the public, and as an instrument of research, by appointing a standing committee to visit it and to report annually upon its condition and needs.

The income of the Bussey Institution from the Bussey Trust Fund fell in 1879–80 to $3,505.30, of which $3,000 were due in virtue of a contract to the Instructor in farming. Professor Storer received $500 and Professor Slade $250 from the tuition-fees as their entire compensation for the year; Messrs. Burgess and Faxon generously gave the Institution their valuable services as Instructors; Mr. Watson, the Instructor in Horticulture, received $600 provided by means of a special subscription; and Mr. Ford received $350 from a similar source. The necessary expenses of the Stone Building, the greenhouses, and the dissecting-room, were met by the income of the Building Fund, and a small credit balance was carried forward to the current year. The instruction provided was never before so ample and excellent as it was in 1879–80; and all the teachers of last year are again serving the Institution during the current year, Mr. Edward Burgess continuing to give the School his services as Instructor in Entomology.

The rents of the warehouses and other buildings for business purposes in which the Bussey Trust is invested have improved during the current year, and it is probable that the Institution has seen its worst days. Only five years ago, it had an income from the Bussey Trust of $17,155.92.

The Director of the Arnold Arboretum has been forced to postpone the permanent planting of the trees which he has been raising in nurseries, because the negotiations with the City of Boston for a joint occupancy of the Arboretum by the University and the City are still pending. He has turned his attention, meanwhile, to the preparation of an economic museum of trees and woods, and of an herbarium of ligneous plants. These collections are under the charge of Assistant John Robinson, whose report for the year is printed in the Appendix (IV.).

The Librarian's Report shows that the Library is growing rapidly, and that the use of the books increases. Good progress has been made in rearranging the books by subjects in the new stack, and the catalogue has received more than the usual amount of study. The bibliographical publications of the Library have been small, from lack of money to pay for the printing. For this reason, also, the energies of the Librarian have been in good degree diverted to other literary labor. The administration and service of the Library now cost the College proper about $20,000 a year, this large sum being taken directly from the College tuition-fees. No other department makes any contribution to the support of the Library; although all departments use it freely, as the statistics in the Librarian's Report demonstrate. An adequate endowment of the Library would immediately set free this $20,000, which could be used — to quote the admirable terms in which the Rev. Daniel Austin lately left a legacy of $7,000 to the President and Fellows — "for some good College purpose or purposes, at the discretion of the College government or their successors." As the level of the instruction given at the University rises above the elementary grades, the Library is seen more and more clearly to be the one thing essential to the life and growth of the whole Institution. To endow the administration and service of the Library would, therefore, be to render to the University the most lasting and fruitful of services. Meanwhile the heavy outlay made by the College for the Library is not to be grudged; for it is the most necessary and remunerative of expenditures.

On the 14th of June, 1880, the Corporation ordered, in accordance with the wishes of the Board of Overseers, that the Library be opened on Sundays for the use of students, from and after the beginning of the next academic year, from 1 P. M. to 5 P. M, or sunset if earlier.

The publications of the Observatory have been issued during the past five years at the unprecedented rate of more than a volume a year, and if there were money to defray the cost of printing this rate of publication could be maintained; for the five-year subscription has rendered it possible annually to make, reduce, and prepare for publication a great number of observations.

The Director, having wisely selected the physical side of astronomy as a principal field of labor, has planned his investigations in such a way that persons of little skill can do a large share of the work; has devised new instruments capable of yielding, with rapidity and certainty, results of an accuracy suited to the nature of the research in hand; has distributed the force at his command judiciously between observation, reduction, and publication; and has prosecuted both the scientific and the administrative work of the establishment with a contagious ardor. For the credit of American astronomy it is to be hoped that the means of publishing the results of their devoted labors will be placed at the disposal of the Director and his associates.

The subjoined Report of the Curator of the Museum of Comparative Zoölogy should be read by every one who is interested in the development of natural history at the University; for it sets in a clear light the following objects which the Curator is unweariedly pursuing: —

1. He is enriching the Museum from time to time by buying, as occasion offers, special collections of ascertained value. 2. He is making and promoting researches in zoölogy and geology, and publishing them in the Bulletins and Memoirs of the Museum. 3. He is enlarging the building to gain space for new exhibition-rooms, which will permit the systematic arrangement and suitable display of

such portions of the collections as are adapted to public exhibition. 4. As fast as these rooms are finished, he is causing well-arranged collections to be displayed in them. 5. He is still farther enlarging the building, in order to provide adequate laboratories and lecture-rooms for the elementary and advanced classes in zoölogy and geology, and working-rooms for special students of these subjects. For the accomplishment of these objects, he has at his disposition the income of the permanent funds of the Museum, which now amount to $550,732.11. This income being entirely insufficient to carry on the work at a rate satisfactory to the Curator, he himself provides whatever further sums his undertakings require. The Museum building is now 312 feet long, with an average width of about 70 feet, and it is five stories in height beside the basement and attic. The northern wing and the northwestern corner-block are externally completed.

The examinations for women which the University has conducted since 1874 were fundamentally changed near the close of the year 1879–80, at the instance of the ladies who had taken the warmest interest in them. The original examinations did not closely resemble the examinations for admission to the colleges for men; in some respects they were easier, and in others much harder; in general they were more thorough; there was a greater number of options, and at the advanced examination a possibility of concentrating study upon single lines. The examinations as a whole did not represent existing courses of study either in girls' schools or in women's colleges, and they set up an unusual standard which very few young women could find means to reach. Since 1874, several institutions which propose to give a collegiate education to women have come into existence, and have to some extent prescribed the course of study in secondary or preparatory schools for girls. To the persons who have arranged the courses of study in these new institutions, it has seemed safest simply to copy the arrangements of an ordinary college for men, faults and all; and especially to have an admission examination much like the conventional entrance examination of a New England College for men. It is thus made easy for the numerous high schools and academies which fit boys for college to fit girls too; for no new subjects need be taught for the girls' sake, and no new demands need be made upon the teachers. In conformity with this general tendency, and the specific wish of the Committee of the Women's Education Association, which has borne the cost of the Harvard Examinations for Women from the beginning, those examinations will hereafter be nearly identical with the examinations for admission to Harvard College. Professor Dunbar, chairman of the committee of the College Faculty on the Examinations for Women, has presented a detailed report upon the examinations of the last two years, which is printed in the Appendix (V.).

The proceeds of the bequest of Dr. Martyn Paine, of New York, amounting to $24,207.02, were received in the spring of 1880. As the testator directs that the fund shall be invested in United States or State stocks, or in mortgages, and that no part of the fund shall be used until the annual income shall amount to $8,000, it is not probable that any use can be made of the bequest before 1920. The primary objects of the trust are scholarships, the purchase of books for the Library, and prize treatises. The first two objects have been for twenty-five years the commonest form of gift to the College, and therefore call for no remark; but the provisions of the will about the prize treatises are peculiar and interesting. Dr. Paine provides that, when the income of the fund has reached $8,000, $1,500 a year be set aside and invested by itself, and that the amount thus accumulated in four years be used as follows: $5,000 for a quadrennial prize, $1,000 for the compensation of the judges, $500 for the President of the

College, and the balance for expenses. The prize treatises are to be printed by the authors and put on sale, — one half the proceeds going to the author, and one half to the College; and ingenious directions are given as to the uses of the moiety which goes to the College, Dr. Paine's general purpose being to give the President a pecuniary interest in the successful working of this part of the trust. Twelve subjects are specified by Dr. Paine for the first series of prize treatises, covering forty-eight years. They are as follows: —

1. Ethnic religions and the progress of Protestant Christianity.
2. Commerce as a science and an art.
3. The progress of medicine.
4. The constitution of civil society and the philosophy of legislation.
5. A general work on inorganic chemistry.
6. A general work on materia medica and therapeutics, based upon Dr. Paine's work on that subject.
7. Agriculture as a science and an art.
8. The science of political economy.
9. A work upon human physiology.
10. A general view of natural philosophy — its progress and influence.
11. The progress of the useful arts.
12. A retrospective view of the human race — its arts, sciences, and laws, and the changes of population in different countries.

After this series has been once completed, the President and Fellows are permitted to change any of the subjects except the third, fifth, sixth, and ninth, which must always be given out in their order. The twelve subjects are all of general interest at present; if they cease to be with lapse of time, two thirds of them can be changed; only the sixth presents any difficulty. To this novel but not unpromising experiment Dr. Paine devotes less than one fifth of the income of the fund. The whole fund, the scholarships, the books bought for the Library, and the prizes, are to bear the name of the testator's son, Robert Troup Paine.

On the 15th of December, 1879, a fire broke out in the upper story of Stoughton Hall, which was not extinguished until half the roof had been destroyed. This fire, following so soon upon the similar fire in Hollis Hall, induced the Corporation to take further precautions against fire in their buildings. Tight party-walls were perfected in Holworthy, Hollis, and Stoughton; convenient access to all the attics was secured; axes and rubber sheets were provided; a second Bangor ladder and a light rope ladder were procured; two stand-pipes with hose were placed in Memorial Hall, and automatic sprinklers were distributed through the basement of that building; finally, more lights were provided in the College Yard, that the darkness of the enclosure might not be a hinderance to the Fire Department in case of an alarm at night. The Corporation also gave a chemical engine, and its equipments complete, to the City of Cambridge, at a cost of $3,000, in the hope that such an engine would be useful in extinguishing small fires without the application of a flood of water.

The Hemenway Gymnasium fulfils the best hopes of its usefulness. The difference in the annual cost to the College of carrying on the new gymnasium and the old, including the salary of the Director, is quite $2,400; but this expenditure is one of the most legitimate and satisfactory which the College incurs. The contribution of the College towards the cost of the apparatus for the Gymnasium was $1,789.23, Mr. Hemenway generously giving at least twice that sum.

The Treasurer's Statement shows that in 1879–80 every department of the University had a surplus, except the College, which had a deficit of $9,557.27. Some of the unusual expenditures which account for this serious deficit have just been mentioned above. The Treasurer mentions others of like nature, and anticipates a still larger deficit for the current year, because of a large outlay for walks, heating-apparatus, and water-closets in the College Yard. The running expenses of Sever Hall will also be a new tax upon the College during the current year. The Treasurer reports gains of capital during 1879–80 (for the advantage of all the funds generally invested), by sales of stocks and bonds at prices higher than were paid for them, to the amount of $16,859.70.

The Corporation are disposed, as opportunity offers, to reduce the amount of the special investments, by transferring them to the general investments. The consent of the persons interested, if any there be, is generally very readily obtained; because the great body of the general investments gives a sense of security which no special investment affords. The reduction effected during 1879–80 in the amount of the special investments was $91,999.86.

On the 5th of March, 1880, the Legislature passed an Act entitled "An Act to provide for the eligibility of persons not inhabitants of this Commonwealth as Overseers of Harvard College." The Act was to take effect when it had been assented to by the Corporation and Overseers. The assent of the Corporation was given on the 31st of May, and that of the Overseers on the 2d of June following.

For several years past, all the professional schools and the graduate department have been animated by an admirable spirit of earnest work. The Board of Overseers may be assured that this vigorous spirit is pervading the College as well, informing the whole body of teachers and students, and manifesting itself in the quickening of a great variety of serious intellectual interests.

The usual information concerning the number of students, and the honors, prizes, and degrees given in 1879–80, together with a list of the examining committees appointed for that year by the Board of Overseers, will be found in the Appendix (VI.–X.). The attention of the Overseers is invited to the following Reports from the Deans of the several Faculties, the Secretary of the Academic Council, the Librarian, the Directors of the Botanic Garden, the Arnold Arboretum, and the Observatory, and the Curator of the Museum of Comparative Zoölogy.

CHARLES W. ELIOT, *President.*

CAMBRIDGE, Jan. 7, 1881.

REPORTS

OF THE

DEANS OF THE FACULTIES, THE SECRETARY OF THE ACADEMIC COUNCIL, THE LIBRARIAN, THE DIRECTORS OF THE BOTANIC GARDEN, THE ARNOLD ARBORETUM, AND THE OBSERVATORY, AND THE CURATOR OF THE MUSEUM OF COMPARATIVE ZOÖLOGY.

To the President of the University: —

Sir, — As Dean of the College Faculty, I have the honor to present the following Report upon the administration of Harvard College during the academic year 1879–80.

The number of undergraduates at the beginning of the year was eight hundred and thirteen. The changes of all kinds in the composition of the College classes, from October, 1879, to October, 1880, were as follows: —

Present Oct., 1879.	Left the Class.	Admitted Oct., 1880.	Present Oct., 1880.
Seniors . . . 171	Class Graduated.	. .	. .
Juniors . . . 201	10	5	Seniors . . . 196
Sophomores . . 196	18	8	Juniors . . . 186
Freshmen . . . 245	45	4	Sophomores . . 204
813		New Class.	Freshmen . . . 243
			829

Of the whole number of students set down as having left their classes, forty-four either left College or were dropped to some lower class in consequence of an unprofitable use of their time, nine withdrew by reason of ill-health, and one was advanced to a higher class, under exceptional circumstances. Three deaths have occurred, one from acute disease, soon after the beginning of the College year, one from some cause not reported to me during the Christmas recess, and one from typhoid fever near the close of the summer vacation. Of the students leaving College by reason of general changes of plans as to the future, it is believed that the number who were led to this step by pecuniary embarrassments is smaller than for two or three years past.

The usual tables are given on pages 50–59, showing the names of the instructors in charge of the various courses of study, the number of students in attendance upon each at the beginning of May, the number of sections in each course, and the number of hours of attendance per week, both for students and instructor. These tables, it will be observed, present only the courses established for undergraduates. A considerable number of undergraduates also received instruction in some of the courses established for graduates by the authority of the Academic Council, the students enjoying this exceptional privilege being for the most part Juniors and Seniors, whose proficiency in special branches qualified them for advanced study.

Instruction in Elocution was also given during the year by Mr. Riddle and Mr. Ticknor to such students as chose to avail themselves of the opportunity. One hundred and twenty-three Seniors and Juniors had weekly appointments, at which the instructor devoted his time to them individually, and one hundred and forty-six Sophomores and Freshmen attended in sections. The entirely voluntary system on which this instruction is now given appears to have completely restored its efficiency, and there is a strong pressure for all the time that the instructors can give to it. Even with the addition of a third instructor for the current year it is doubtful whether all the wants of those who are willing to give time and labor to cultivate their powers of speech can be met.

The names of the students who received academic honors, or to whom honors or prizes of any kind were awarded during the year, are given in a statement which accompanies this Report (see Appendix, VII. and VIII.).

At the close of the last year, the rule of the Faculty by which any student who does not secure forty per cent of the maximum mark on the average of all his studies for the year, is required to join a lower class as the necessary condition of his remaining in College, was enforced in the case of one Sophomore and of twenty-one Freshmen. To these should be added one Sophomore and

PRESCRIBED STUDIES.

Instructors.	Subjects.	Text-books.	No. of Students.	No. of Sections.	Exercises per week for Students.	Exercises per week for Instructors.
		FRESHMEN.				
Messrs. Dyer and L. B. R. Briggs	Greek	[*Maximum Sections.*] — Lysias (Four Orations). — Plato (Apology). — Homer (Odyssey, Books XIII. — XXI.). — Goodwin's Greek Moods and Tenses. — Sidgwick's Greek Prose Composition, Part I. — Translation at Sight. — Lectures on Greek Literature	95	5	8	15
		[*Advanced Sections.*] — The above, and also Euripides (Medea)	85	3	3	9
		[*Minimum Section.*] — Selections from Herodotus. — Homer (Iliad, Books IV. — VIII.). — Goodwin's Greek Moods and Tenses. — Sidgwick's Greek Prose Composition. — Translation at Sight. — Lectures on Greek Literature	45	1	3	3
Messrs. Hale and Gould	Latin	[*Maximum Sections.*] — Livy (Books I. - V.). — Horace (Odes and Epodes). — Cicero (Walford's Extracts, Part I., in connection with Composition). — Extemporaneous Translation. — Ihne's Early Rome (Chapters I.–IX.). — Lectures on Latin Literature	116	5	3	15
		[*Advanced Sections.*] — The above, and also Cicero (De Amicitia)	81	3	3	9
		[*Minimum Section.*] — Livy (Selections from Books I.–II.). — Cicero (De Senectute). — Homer (Odes and Epodes). — Lectures on Latin Literature. — Extemporaneous Translation	18	1	3	3
Messrs. Sheldon and Lutz	German	Sheldon's Grammar. — Otto's Reader (50 pages). — Selections from Spielhagen and Andersen. — Composition	186	8	3	24
Prof. Jacquinot	French	Brachet's Petite Grammaire Française, Part I. — Bôcher's Reader. — Selections from Achard, De Maistre, and Feuillet	25	1	3	3
Profs. C. J. White, and Byerly, and Messrs. G. R. Briggs and H. N. Wheeler	Mathematics	[*Maximum Section.*] — Algebra (Todhunter, chapters I.–XXXVI., XLVI., LIII.). — Analytic Geometry (Lectures)	37 1 Soph. 8 Jun.	1	7 in two weeks	7 in two weeks
		[*Minimum Sections.*]. — Algebra (as above). — Solid Geometry (Chauvenet). — Plane Trigonometry (Wheeler). — Analytic Geometry (Lectures)	194	8	7 in two weeks	28
Mr. Willson and Mr. N. D. C. Hodges	Physics	[*Maximum Section.*] — Stewart's Conservation of Energy (chapters I.-V.). — Maxwell's Theory of Heat (omitting chapters X.-XVIII.)	27	1	2	2
		[*Minimum Sections.*] — Deschanel's Natural Philosophy, Part I. — Tyndall's Notes on Light	198	6	2	12
Prof. Cooke	Chemistry	Elementary Chemistry (Twenty-four Lectures)	225	1	1 after Christmas	1 after Christmas

		SOPHOMORES.				
Mr. Ware	Rhetoric	Hill's Principles of Rhetoric. · Abbott's How to Write Clearly	188 1 Fresh.	4	2	8
Mr. Perry	Themes	Six Themes, corrected and rewritten	188			
		JUNIORS.				
Prof. A. S. Hill, Mr. Perry and Mr. Ware.	Themes	Six Themes, corrected and rewritten	191			
Prof. Palmer	Forensics	Four Forensics Theses substituted for Forensics, as allowed by the rules, by	184 16			
		SENIORS.				
Prof. Peabody	Forensics	Four Forensics Written Work substituted for one or more Forensics, as allowed by the rules, by	158 58			

ELECTIVE STUDIES.

Instructors.	Courses.	Subjects and Text-Books.	No. of Students.	No of Sections.	Exercises per week for Students.	Exercises per week for Instructors.
Prof. Young	Hebrew	Hahn's or Theile's Biblia Hebraica. — Conant's Gesenius's Grammar	2 Sen. 1 Jun. 1 Soph. 2 Grad. 1 Unm.	1	8	8
Prof. Greenough	Sanskrit	Elements of Sanskrit Grammar. — Hitopadeça (Book I.)	4 Jun. 1 Grad.	1	8	8
Prof. Greenough	Classics 1	Introduction to Comparative Philology. — Lectures	4 Jun. 6 Soph. 1 Fresh. 1 Grad.	1	1	1
Prof. Greenough	Classics 2	Greek and Latin Comparative Philology (Curtius's Etymology. — Papillon's Greek and Latin Inflections)	8 Grad.	1	2	2
Prof. J. W. White	Greek 1	Aeschylus (Prometheus). — Sophocles (Oedipus Tyrannus). — Demosthenes (Philippics and Olynthiacs).	4 Jun. 80 Soph. 1 Grad.	1	2	2

ELECTIVE STUDIES. — CONTINUED.

Prof. J. W. White	Greek 2	Thucydides (Sicilian Expedition).— Aristophanes (Birds).— Homer (Iliad XVIII.) and Lectures on Greek Etymology.	8 Jun. 52 Soph. 1 Fresh. 2 Grad. 1 Unm.	1	2	2
Prof. J. W. White	Greek 3	Xenophon (Hellenica). — Herodotus (Four Books)	4 Sen. 14 Jun. 42 Soph. 1 Fr.	1	2	2
Prof. J. W. White	Greek 4	Greek Composition (First Course). — Sidgwick's Greek Prose Composition, Part II. — Reid's Passages for Practice in Translation at Sight	10 Jun. 41 Soph. 1 Fresh. 2 Grad. 1 Unm.	2	1	2
Prof. Goodwin	Greek 5	Greek Composition (Second Course). — Wilkins's Greek Prose Composition. — Thucydides	10 Sen. 2 Grad.	1	1	1
Prof. Sophocles	Greek 6	Arrian (Anabasis). — Polybius, (Selections)	8 Jun. 2 Soph. 1 Div.	1	2	2
Prof. Goodwin	Greek 7	Demosthenes De Corona and De Falsa Legatione, with parts of Aeschines against Ctesiphon. — Thucydides (parts of Books I. and II.)	1 Sen. 13 Jun. 1 Soph. 2 Grad.	1	3	3
Prof. Goodwin	Greek 8	Plato (Phaedrus, and Republic, 8-10). — Aristotle (Politics, §§ 2, 3, 4, 7)	18 Sen. 8 Jun. 5 Grad. 1 Unm.	1	3	3
Prof. Goodwin	Greek 9	Aeschylus (Eumenides and Septem). — Sophocles (Oedipus at Colonus).— Aristophanes (Knights and Clouds). — Pindar	9 Sen. 15 Jun. 8 Grad.	1	2	2
Prof. Smith	Latin 1	Terence (Andria and Heautontimoroumenos). — Cicero (Letters). — Horace (Epistles and Ars Poetica)	8 Jun. 87 Soph. 4 Fresh.	2	2	4
Prof. Greenough	Latin 2	Terence (Phormio and Adelphi). — Cicero (Pro Muraena) — Horace (Satires)	8 Jun. 98 Soph. 5 Fresh.	3	2	6
Prof. Smith	Latin 3	Latin Composition (First Course)	2 Sen. 1 Jun. 85 Soph. 5 Fresh. 2 Grad.	2	1	2
Prof. Smith	Latin 4	Thackeray's Anthologia Latina. — Cruttwell's History of Roman Literature	5 Sen. 12 Jun. 7 Soph. 2 Grad.	1	2	2

Prof. Lane	Latin 5	Suetonius. — Tacitus (Annals). — Juvenal	2 Sen. 32 Jun. 6 Soph. 1 Grad.	2	3	6
Prof. Smith	Latin 6	Latin Composition (Second Course)	3 Sen. 7 Jun. 3 Soph. 1 Grad.	1	1	1
Prof. Lane	Latin 7	Plautus (Captivi, Trinummus, Miles Gloriosus). — Lucretius	23 Sen. 6 Grad.	1	3	3
Prof. Child	English 1	English Literature. — Chaucer (Selections). — Bacon's Essays. — Milton's Poems	7 Sen. 9 Jun. 16 Soph. 1 Unm.	1	3	3
Prof. Child	English 2	English Literature. — Shakspere (Romeo and Juliet, Henry Fifth, Hamlet, Winter's Tale, Othello, As You Like It, Twelfth Night)	13 Sen. 30 Jun. 20 Soph. 1 Fresh. 1 Grad. 2 Sci.	1	3	3
Prof. Child	English 3	English. — Sweet's Anglo-Saxon Reader	1 Sen. 2 Jun.	1	2	2
Prof. Child	English 4	Early English. — Mätzner's Altenglische Sprachproben [Omitted in 1879–80.]			2	
Prof. A. S. Hill	English 5	Rhetoric and Themes (Advanced Course)	13 Sen. 2 Jun. 2 Grad. 1 Unm.	1	3	3
Prof. A. S. Hill	English 6	Oral Discussion	21 Sen. 1 Unm.	1	1 in two weeks	3 hours in two weeks.
Prof. A. S. Hill	English 7	English Literature of the Eighteenth and Nineteenth Centuries	3 Sen. 15 Jun. 1 Soph. 1 Fresh. 2 Unm.	1		1
Prof. W. Cook	German 1	Zschokke's Neujahrsnacht. — Hillebrand's England. — Stoll's Altrömische Leben. — Sheldon's Grammar	1 Sen. 10 Jun. 62 Soph. 4 Fresh. 1 Law	2	3	6
Prof. Bartlett	German 2	Allgemeine Deutsche Biographie. — Der Neue Plutarch (III., VI.). — Müller's Geschichte des Deutschen Volkes	2 Jun. 54 Soph. 2 Fresh.	2	3	6
Mr. H. B. Hodges	German 3	Hodges's Course in Scientific German. — Selections from Virchow's Gemeinverständliche Wissenschaftliche Vorträge	4 Sen. 6 Jun. 11 Soph. 1 Unm. 3 Sci.	1		2

ELECTIVE STUDIES. — CONTINUED.

Prof. W. Cook	German 4	German Composition. — Sheldon's Grammar	1 Sen. 1 Jun. 9 Soph. 1 Fresh.	1	1	1
Prof. Bartlett	German 5	Müller's Geschichte des Deutschen Volkes. — Allgemeine Deutsche Biographie (VII.). — Körner. — Chamisso. — Grillpartzer	3 Sen. 13 Jun. 2 Soph. 1 Law	1	3	3
Prof. W. Cook	German 6	Goethe (Reinecke Fuchs and Hermann und Dorothea). — Schiller (Piccolomini and Raüber)	13 Sen. 66 Jun. 5 Soph. 3 Fresh.	2	3	6
Prof. Bartlett	German 7	Dramas and Lyric Poetry of Goethe and Schiller. — Selections from Contemporary Authors	13 Sen. 2 Jun. 1 Div.	1	3	3
Prof. Hedge	German 8	Goethe (Aus meinem Leben, Gedichte, and Faust). — Richter (Flegeljahre)	5 Sen. 3 Jun. 1 Soph. 1 Fresh. 2 Grad.	1	3	3
Prof. Jacquinot	French 1	Fénelon (Dialogues des Morts). — G. Sand (Nanon). — J. Sandeau (M'lle de la Seiglière). — E. Augier (Ceinture Dorée). — Brachet's Petite Grammaire Française, 2me Partie	1 Sen. 7 Jun. 43 Soph. 3 Fresh.	2	3	6
P Bôcher	French 2	Racine. — La Fontaine's Fables. — Taine (La Fontaine et ses Fables). — Guerard's Grammaire Française	16 Jun. 24 Soph. 3 Fresh. 1 Grad. 1 Unm.	2	3	6
Prof. Bôcher	French 3	Molière. — Alfred de Musset (Histoire d'un Merle Blanc). — Montaigne (Essais)	7 Sen. 17 Jun. 4 Soph. 2 Fresh. 1 Sci.	1	3	3
Prof. Jacquinot	French 4	Charpentier (La Littérature Française au XIXme Siècle). — Selections from Victor Hugo, A. de Musset, Balzac, G. Sand, Sainte Beuve, E. Augier	6 Sen. 3 Jun. 3 Soph.	1	3	3
	French 5	Old French. — Chanson de Roland. — Chrestomathie de l'Ancien Français) [Omitted in 1879–80.]				
Mr Bendelari	French 6	Historical French Prose. — Mignet's Histoire de la Révolution Française	4 Sen. 19 Jun. 12 Soph. 1 Unm.	1	2	2

Mr. Bendelari	Italian 1	De Amicis (La Vita Militare). — Goldoni (Il Bugiardo). — Silvio Pellico (Le Mie Prigioni). — Toscani's Grammar	16 Sen. 24 Jun. 3 Soph. 1 Fresh.	2	3	6
Prof. Nash	Italian 2	Manzoni (I Promessi Sposi). — V. Bersezio (Uno Zio Milionario). — Tasso (Gerusalemme Liberata)	11 Sen. 3 Jun.	1	3	3
Prof. Nash	Italian 3	Ariosto (Orlando Furioso). — Boccaccio (Decamerone). — Petrarca (Le Rime and Trionfi). — Selections from and analysis of Dante's Commedia	5 Sen. 1 [illegible]d.	1	3	3
Mr. Bendelari	Spanish 1	Gil Blas. — Hartzenbusch (El Eco de Madrid). — Josse's Grammar	3 Sen. 9 Jun. 2 [illegible]h.	1	3	3
Prof. Nash	Spanish 2	Don Quixote. — Hartzenbusch (La Coja y el Encogido). — L. F. de Moratin (Three Plays)	12 Sen. 3 Jun. 1 Soph.	1	3	3
Prof. Nash	Spanish 3	Calderon. — Lope de Vega. — Poem of the Cid	5 Sen.	1	3	3
Prof. Bowen	Philosophy 1	Mill's Examination of Sir William Hamilton's Philosophy. — Bowen's Logic	13 Jun. 21 Soph. 1 Grad.	1	2	2
Prof. Palmer	Philosophy 2	Ferrier's Lectures on the Greek Philosophy. — Jevons's Logic	36 Jun. 33 Soph. 1 Fresh.	1	2	2
Prof. James	Philosophy 3	The Philosophy of Evolution. — Spencer's First Principles	2 Sen. 3 Jun. 5 Soph. 1 Fresh. 1 [illegible]m.	1	2	2
Prof. Peabody	Philosophy 4	Ethics. — Peabody's Moral Philosophy. — Janet's La Morale	53 Sen. 36 Jun. 3 Soph. 2 [illegible]	1	3	3
Prof. James	Philosophy 5	Contemporary Philosophy. — Renouvier's Essais de Critique Générale	4 Sen. 1 Jun. 2 Grad. 2 Law	1	3	3
Prof. Palmer	Philosophy 6	English Philosophy. — Locke's Essay on Human Understanding. — Fraser's Selections from Berkeley. — Hume's Essays	11 Sen. [illegible] J[illegible] 1 Soph. 1 Grad.	1	3	3
Prof. Bowen	Philosophy 7	French and German Philosophy. — Bouillier's Histoire de la Philosophie Cartésienne. — Kant's Critique of Pure Reason. — Bowen's Modern Philosophy	23 Sen. 7 Jun. 1 Grad. 1 Unm.	1	3	3
Prof. Bowen	Philosophy 8	German Philosophy of the Present Day. — Schopenhauer (Die Welt als Wille und Vorstellung). — Hartmann (Die Philosophie des Unbewussten)	1 Sen. 2 Grad. 2 Div.	1	3	3

ELECTIVE STUDIES. — CONTINUED.

Dr. Laughlin and Prof. Dunbar	Political Econ. 1	(Partial Course.) — Selections from Mill's Principles of Political Economy. — Lectures	7 Sen. 9 Jun. 4 Soph. 1 Law	1	2	2
Prof. Dunbar	Political Econ. 2	Mill's Principles of Political Economy. — Financial Legislation of the United States. — Lectures	10 Sen. 83 Jun. 13 Soph. 2 Unm.	2	3	6
Prof. Dunbar	Political Econ. 3	Cairnes's Leading Principles of Political Economy. — McLeod's Elements of Banking. — Bastiat's Harmonies Économiques	24 Sen.	1	3	3
Dr. Emerton	History 1	Introductory Course. — Mediæval and Modern History, chiefly of Germany, Italy, and Spain. — Lewis's History of Germany. — Hunt's History of Italy	27 Soph. 1 Fresh. 1 Sci.	1	2	2
Mr. Macvane	History 2	Introductory Course. — Mediæval and Modern History, chiefly of France and England. — Green's Short History of the English People. — Kitchen's History of France, vol. I. — Student's History of France	5 Jun. 51 Soph. 6 Fresh. 1 Unm.	2	2	2
Mr. Macvane	History 3	Introductory Course. — Constitutional Government in England and the United States	1 Jun. 17 Soph. 3 Fresh. 1 Sci.	1	2	2
Prof. Gurney	History 4	Later Roman and Early Mediæval History, with special reference to Institutions	2 Sen. 7 Jun. 2 Soph. 2 Grad. 1 Law	1	2	2
	History 5	The General History of Europe from the beginning of the Ninth to the end of the Thirteenth Century [Omitted in 1879-80.]			3	
Dr. Emerton	History 6	The Revival of Learning and the Reformation (1300-1550)	6 Sen. 11 Jun. 2 Soph. 1 Fresh. 2 Grad.	1	3	3
Mr. Macvane	History 7	History of England to the Seventeenth Century	17 Sen. 24 Jun. 4 Soph. 1 Grad.	1	3	3
Mr. Hoague	History 8	Constitutional and Political History of the United States, to 1836	56 Sen. 24 Jun. 4 Fresh.	1	3	3
	History 9	European History during the Seventeenth Century and the first half of the Eighteenth [Omitted in 1879-80.]			3	
Prof. Torrey	History 10	European History from the middle of the Eighteenth Century	45 Sen. 42 Jun.	2	3	6

Prof Gurney	Roman Law	Institutes of Gaius and Justinian. — Maine's Ancient Law	17 Sen. 3 Jun. 1 Grad. 2 Law	1	3	3
Mr. Moore	Fine Arts 1	Principles of Design in Painting, Sculpture, and Architecture	3 Sen. 5 Jun. 3 Soph.	1	3	3
Prof. Norton	Fine Arts 2	Ancient Art. — Reber's Kunstgeschichte des Alterthums	22 Sen. 26 Jun. 6 Soph. 2 Unm. 1 Div.	1	3	3
Prof. Norton	Fine Arts 5	Romanesque and Gothic Art, from the year 1000 to 1350. — Schnaase's Geschichte der bildenden Künste, IV. and V.	36 Sen. 23 Jun. 1 Soph. 1 Grad. 2 Unm.	1	3	3
Prof. Paine	Music 1	Richter's Harmony	1 Sen. 5 Jun. 15 Soph. 1 Fresh. 1 Unm. 1 Sci.	1	2	2
Prof. Paine	Music 2	Richter's Counterpoints. — Richter's Canon and Fugue	3 Jun. 1 Soph. 1 Unm.	1	3	3
Prof. Paine	Music 3	History of Music	13 Sen. 20 Jun. 3 Soph.	1	3	3
Prof. Paine	Music 4	The Instrumental Music of Haydn, Mozart, Beethoven, and their successors. — Pauer's Musical Form	1 Sen. 1 Jun. 5 Soph. 2 Unm.	1	1	1
Prof. C. J. White	Mathematics 1	Practical Applications of Trigonometry, Plane and Spherical. — Wheeler's Trigonometry. — Problems. — Lectures on Astronomy and Navigation	1 Sen. 2 Jun. 3 Soph. 1 Fresh. 1 Unm.	1	2	2
Prof. J. M. Peirce	Mathematics 2	Differential and Integral Calculus (First Course). — Byerly's Differential Calculus	2 Sen. 3 Jun. 22 Soph. 1 Grad.	1	2	2
Prof. J. M. Peirce	Mathematics 3	Theory of Equations; including Determinants. — Todhunter's Theory of Equations	9 Soph.	1	2	2
Prof. Byerly	Mathematics 4	Analytic Geometry (for students who had taken the Advanced Freshman Course in Mathematics)	2 Jun. 13 Soph.	1	2	2
Prof. Byerly	Mathematics 5	Differential and Integral Calculus (Second Course)	13 Jun.	1	3	3

ELECTIVE STUDIES. — CONTINUED.

Prof. J. M. Peirce	Mathematics 6	Analytic Mechanics (First Course). — Clifford's Elements of Dynamic. — Kerr's Rational Mechanics. — Thomson and Tait's Elements of Natural Philosophy. — Peirce's Analytic Mechanics	5 Jun.	1	3	3
Prof. Eustis	Mathematics 7	Descriptive Geometry and Perspective. — Church's Descriptive Geometry	3 Sen. 1 Sci.	1	3	3
Prof. Byerly	Mathematics 8	Analytic Mechanics and the Theory of Light	9 Sen. 1 Grad.	1	3	3
Prof. J. M. Peirce	Mathematics 9	Quaternions (Second Course). — Tait's Quaternions. — Hamilton's Elements of Quaternions. Peirce's Analytic Mechanics. — Clifford's Elements of Dynamic	3 Sen.	1	3	3
Prof. B. Peirce	Mathematics 10	Exercises in Quaternions. — Tait's Quaternions	3 Sen.	1	3	3
Prof. Lovering	Physics 1	Herschel's Outlines of Astronomy. — Deschanel's Optics. — Tyndall's Heat as a Mode of Motion	2 Sen. 6 Jun. 10 Soph. 1 Fresh.	1	2 or 3	3
Prof. Trowbridge	Physics 2	Kohlrausch's Physical Measurements. — Practical Exercises in the Laboratory, including the use of Instruments of Precision	4 Sen. 11 Jun. 13 Soph. 1 Fresh. 1 Unm. 3 Sci.	1	3	3
Prof. Trowbridge	Physics 3	The Conservation of Energy. — Lectures	3 Sen. 3 Jun. 3 Soph. 1 Law	1	2	2
Prof. Lovering	Physics 4	Deschanel's Electricity and Magnetism. — Lloyd's Undulatory Theory of Light	2 Sen. 1 Jun. 1 Soph.	1	3	3
Prof. Gibbs	Physics 5	The Spectroscope and its Applications. — Thermodynamics and Thermics, including the applications of Heat	3 Sen. 3 Sci.	1	3	3
Prof. Jackson	Chemistry 1	Descriptive Chemistry. — Lectures and Laboratory Work	1 Sen. 14 Jun. 54 Soph. 1 Fresh. 2 Grad. 2 Unm. 3 Sci.	2	3	6
Prof. Cooke and Mr. Melville	Chemistry 2	Determinative Mineralogy and Lithology. — Dana's Text-book of Mineralogy. — (With study in the Mineral Cabinet)	7 Sen. 3 Jun. 6 Soph. 1 Fresh. 1 Grad.	1	3	3
Prof. H. B. Hill	Chemistry 3	Qualitative Analysis. — Cooke's Chemical Philosophy. — Hill's Lecture Notes. — Lectures and Laboratory work	1 Sen. 39 Jun. 2 Unm.	1	3	3

Prof. Cooke and Mr. Hodges	Chemistry 4	Quantitative Analysis (in the Laboratory)	5 Sen. 3 Jun. 1 Soph. 1 Grad.	1	3	3
Prof. H. B. Hill	Chemistry 5	The Carbon Compounds. — Lectures and Laboratory work	4 Sen. 1 Jun. 1 Grad. 2 Unm.	1	3	3
Prof. Cooke	Chemistry 6	Advanced Course in Experimental Chemistry (in the Laboratory)	1 Sen. 3 Jun.	1	3	3
Prof. Cooke	Chemistry 7	Crystallography and the Physics of Crystals. — Study in the Mineral Cabinet	3 Jun. 2 Grad.	1	3	3
Mr. Davis	Natural Hist. 1	Physical Geography and Meteorology. — Buchan's Introductory Text-book of Meteorology	28 Sen. 16 Jun. 14 Soph. 1 Fresh. 4 Sci.	1	3	3
Dr. Mark	Natural Hist. 2	Zoölogy	5 Sen. 23 Jun. 17 Soph. 1 Unm. 1 Div. 5 Sci.	1	2	2
Prof. Goodale	Natural Hist. 3	Botany. — Gray's Text-book of Botany. — Lectures and Laboratory work	17 Sen. 30 Jun. 15 Soph. 2 Unm. 1 Div. 5 Sci.	1	3	3
Prof. Shaler	Natural Hist. 4	Geology. — Dana's Text-book of Geology	46 Sen. 39 Jun. 25 Soph. 1 Fresh. 1 Unm. 1 Law 1 Sci.	1	3	3
Prof. Farlow and Dr. Faxon	Natural Hist. 5	Biology (Morphology, Histology and Development of Plants and Animals). — Lectures	3 Sen. 16 Jun. 4 Soph. 1 Fresh. 1 Grad. 6 Unm. 1 Sci.	1	3	3
Dr. Faxon	Natural Hist. 6	Advanced Zoölogy	3 Sen. 1 Jun. 1 Sci.	1	3	3
Prof. Goodale and Prof. Farlow	Natural Hist. 7	Advanced Botany. — Sachs' Text-book. — Luerssen's Handbook. — Lectures and Laboratory work	4 Sen. 2 Jun. 2 Grad.	1	3	3

three Freshmen who were required to leave College before the end of the year, in consequence of hopeless failure or neglect on their part. The following table will show the number of students thus removed or withdrawing from their classes by reason of deficient scholarship, for the last seven years: —

	1874.	1875.	1876.	1877.	1878.	1879.	1880.
Removed to lower classes . . .	13	19	28	17	25	14	22
Withdrawn during the year . . .	10	13	8	16	4	11	4
Total	23	32	36	33	29	25	26
Whole number of students .	706	716	776	823	813	819	813

One hundred and seventy-one students were also notified that they must repeat the work in one or more studies in which they were found deficient, or perform its equivalent, as the condition of being finally recommended for a degree.

Six Seniors failed to receive the Bachelor's degree at the end of the year. Of these, one was deficient in work of the Senior year, three in the work of some previous year, and two in the work of the Senior year and also of some previous year. For the past six years the number of Seniors failing to obtain the degree by reason of failure in scholarship has been as follows: —

	1875.	1876.	1877.	1878.	1879.	1880.
Passed in all their work	138	135	170	144	189	162
Failed, but can make up	11	6	17	11	5	6
Failed, and must repeat the year .	2	3	2	4	..	..

Of the forty-one here recorded as failing to receive their degrees before 1878, twenty-two have now qualified themselves and received their degrees out of course.

The general order of the College during the last year has been excellent, and the cases of discipline have been but few. Three students were suspended in the course of the year, — two for periods a little exceeding three months each, for absence and neglect of duty; and one for five months, for resorting to unlawful expedients at an examination. The unusually small number of cases calling for the infliction of this severe but necessary penalty affords great satisfaction, the result having been reached without any decline of good conduct among the body of students.

The whole number of applicants for admission to the Freshman Class in 1880 was two hundred and seventy-eight, of whom two hundred and thirty-six presented themselves for examination upon the requisitions of the new method, or Method I., with the following results: —

METHOD I.

1878. 133 Candidates. 1879. 179 Candidates. 1880. 236 Candidates.	MINIMUM REQUISITIONS.										
	Cæsar and Virgil.	Latin at Sight and Comp.	Xenophon or Reader.	Greek Sentences.	Ancient History and Geography.	Arithmetic.	Algebra.	Plane Geometry.	Minimum Physics.	English Composition.	French or German.
Percentage failing in each study.											
1878	14	7.5	29	18	20	13	31.5	43	14	19	36
1879	8	11	20	23	18	14.5	28.5	37	19	28.5	21
1880	14	6	17	17	15	14	29	36	11	17	13

	MAXIMUM REQUISITIONS.								
	Cicero and Virgil.	Latin at Sight and Comp.	Herodotus.	Greek Comp.	Iliad.	Trigonometry.	Solid Geometry.	Maximum Physics.	Chem. or Botany.
Percentage failing in each study.									
1878	7	15	17.5	36	21	29	65	38	57
1879	16	28	22	33	13	32.5	60	48	24
1880	14	22	12	33	14	39	48	18	9

Of the remaining forty-two applicants who presented themselves upon the old method, thirty-eight applied for admission upon Course I. and four upon Course II. The admissions and rejections of candidates upon the several methods and courses were as follows: —

	Method I.	Method II.	
		Course I.	Course II.
Candidates offered	236	88	4
„ admitted	216	29	2
„ „ without conditions	82	18	. .
„ rejected	20	9	2

The small number of applicants presenting themselves upon Method II. or the old method, shows how generally the schools and private teachers have adjusted their systems of instruction to the new requisitions, in anticipation of the complete disappearance of the old method after this year. In this easy and successful displacement of the old method, the Faculty recognize the prompt and valuable co-operation of the schools in carrying out the plan for giving a sounder and more liberal basis to the preparatory studies, especially in the classics. It is believed that the successful efforts of teachers to improve their standard of instruction can be traced in the diminished percentage of failure in certain studies, as well as in the general results of the examination.

The selection of maximum subjects under the new method still deserves to be watched with attention, and I accordingly subjoin a statement showing the various combinations offered in the last three years. From this table it appears that the proportion of candidates offering both Latin and Greek, which in 1878 was 84 per cent and in 1879 was 70 per cent, rose to 77 per cent in 1880.

Candidates under Method I.	1878.	1879.	1880.
[Required to offer the maximum in at least *two* subjects.]			
Offered Maximum in			
Latin, Greek, Mathematics, and Physics . . .	2	3	2
Latin, Greek, and Mathematics.	4	8	15
Latin, Greek, and Physics	2	3	7
Latin, Mathematics, and Physics	2	..	2
Greek, Mathematics, and Physics	..	1	..
Latin and Greek	104	109	159
Latin and Mathematics.	3	14	17
Latin and Physics	9	23	20
Greek and Mathematics	1	2	..
Greek and Physics	1	1	4
Mathematics and Physics	5	15	10
Total number of candidates	133	179	236

The numbers of candidates presented at the preliminary examinations for the last three years, and their success in obtaining credit, are shown by the following statement: —

Preliminary Examination.	Candidates.	In Five Subjects.	In Six Subjects.	In Seven Subjects.	In Eight Subjects.	In Nine Subjects.	In Ten Subjects.	In Eleven Subjects.	In Twelve Subjects.	In Thirteen Subjects.	Failed to pass in Five Subjects.
Method I.											
1878	133	16	20	12	15	18	6	..	..	..	46
1879	215	38	29	23	29	13	10	3	..	..	70
1880	214	30	24	31	33	22	10	..	..	..	64
Method II.											
1878	108	20	20	6	8	6	6	3	1	2	36
1879	30	5	4	1	2	6	3	1	1	..	7
1880	4	2	1	..	1	..	..	..	..	..	..

The present rule, providing that no candidate shall be examined in any study in which he is not certified by his teacher to be prepared, and restricting the range of subjects to be offered at the preliminary examination, tends to limit the number of candidates by excluding many who would otherwise be tempted to try their fortune with insufficient preparation; but there is reason to believe that the number of candidates now presenting themselves includes a greater number than ever of young men working systematically with the fixed purpose of entering College.

The results of the examinations for the last three years in the subjects which can be presented under Method I. are as follows: —

Preliminary Examinat'n. METHOD I. 1878, 133 Candidates. 1879, 215 " 1880, 214 "	Caesar and Virgil.	Latin at Sight.	Xenophon or Greek Reader.	Greek Sentences.	Ancient History and Geography.	Arithmetic.	Algebra.	Geometry.	Physics.	English.	French.	German.
Percentage of the whole number of candidates who were examined in each study.												
1878	95	86	69	71	78	90	71	29	71	82	60	6
1879	89	86	74	80	77	96	93	55	55	69	56	7
1880	92	88	78	76	84	97	87	46	61	58	64	5
Percentage of failure among those examined in each study.												
1878	33	28	30	47	40	14	38	72	20	34	26	50
1879	24	25	33	44	23	26	52	78	15	53	13	14
1880	25	25	25	26	39	22	50	61	7	34	21	30

Of the Freshman Class of 1879–80, three had passed examinations on the Greek of the Freshman year, thirteen upon the Latin, fifteen upon the German, two upon the Physics, and four upon the whole or a part of the Mathematics. Elective courses were taken in place of the studies thus anticipated.

The thorough revision of the list of elective studies made during the year 1878–79 left little occasion for any considerable change during the last year. The courses in Hebrew and Sanskrit were, however, reorganized as parts of a comprehensive system of instruction, elementary and advanced, to be given in those languages respectively by Professors Toy and Lanman; the courses in Greek composition were arranged so as to present a systematic body of instruction which the student can follow for three years if he desires; Mr. Hoague's course in American History was divided so as to cover two years in the full development of its subject; an advanced course in Geology was established to be given by Professor Shaler; a course in Psychology to be given by Professor James was established in place of the course in Contemporary Philosophy by the same instructor; and finally the Faculty, in deference to the wishes of Professors Hedge and Norton, reduced the number of hours required by the courses given by these gentlemen respectively.

The general tendency of the elective system and the effect of entire freedom of choice, both on the student and on the attention given to the several studies, continue to be the subjects of careful observation. As regards the influence of the system upon the individual, the experience of the last ten years shows that in the majority of instances the choice of studies is made from year to year with a good degree of continuity and system. Especially is it the case among the more successful students, that the choice is usually found to be the result of a judicious grouping of studies upon some general plan. To illustrate this fact I present herewith a statement showing the studies elected by the first forty students in rank of the class of 1880.* When it is remembered that among the motives acting upon these young men, the ambition for academic distinction was one of the most obvious, and that half of the number were applicants for scholarships and therefore engaged in a keen competition, the course of studies actually followed by most of the number reflects great credit upon their devotion to scholarly ends, and justifies the confidence with which they have been left to determine for themselves the direction of their work. If space permitted the exhibition of the same test as applied to a greater number of students or to other portions of the class, results might be shown which are similar and scarcely less marked in degree. Inconsiderate choices may no doubt be found, and perhaps some combinations nearly as heterogeneous as those of the traditional prescribed course of study; but as a rule the work even of the students of low rank will be found to arrange itself in the direction in which, from the capacities and circumstances of the individual, there is the best promise of willing and profitable study.

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* In preparing this statement (pages 66 and 67), courses taken by the student and completed in addition to the amount of work required by his class are enclosed in brackets [ ].

ELECTIVE STUDIES TAKEN BY FORTY MEMBERS OF THE SENIOR CLASS OF 1879–80.

	Hours taken in Soph. Year.	Hours taken in Junior Year.	Hours taken in Senior Year.
1	2 Greek.	4 Greek.	4 Greek.
	2 Latin.	3 Latin.	3 Latin.
	3 French.	2 German.	2 Phil.
	3 History.	3 History.	3 History.
2	1 Greek.	3 History.	9 History.
		[3 Pol. Ec.]	[2 „]
	4 Math.	3 F. Arts.	3 F. Arts.
	3 German.	3 German.	
	2 N. Hist.	3 N. Hist.	
3	2 Greek.	2 Greek.	
	3 Latin.	3 Latin.	
	3 Pol. Ec.	3 Pol. Ec.	1 Pol. Ec.
	2 Phil.	3 Phil.	3 R. Law.
		3 History.	3 History.
4	3 Greek.	5 Greek.	6 Greek.
	3 Latin.	4 Latin.	3 Latin.
	2 History.	3 Pol. Ec.	3 Pol. Ec.
	2 French.		
5	2 Greek.		
	2 Latin.	3 Latin.	2 German.
	2 Music.	3 French.	2 French.
	1 Math.	3 Math.	3 History.
	3 Chem.	3 Chem.	5 Chem.
6	2 Greek.	3 Greek.	3 Greek.
	3 Latin.	3 Latin.	3 Latin.
	2 Math.	3 German.	3 History.
	3 Chem.	3 Pol. Ec.	3 Pol. Ec.
7	3 Greek.	3 Greek.	3 Greek.
	3 Latin.	3 Latin.	3 Latin.
	2 German.	3 German.	3 Phil.
	2 Math.	3 Chem.	3 Chem.
8	2 German.	3 German.	
	6 Math.	6 Math.	9 Math.
	2 Chem.	3 Phil.	3 N. Hist.
9	3 Greek.	4 Greek.	7 Greek.
	3 Latin.	3 Latin.	3 Latin.
	1 German.	2 German.	2 German.
	3 French.	3 French.	
		[2 English.]	[3 History.]
10	1 Greek.	3 German.	3 German.
	3 Latin.	3 History.	3 History.
	2 N. Hist.	3 N. Hist.	6 N. Hist.
	4 Math.	3 F. Arts.	
11	3 Greek.	4 Greek.	3 Greek.
	2 Latin.	3 Latin.	4 Latin.
	2 Math.	2 Math.	3 Phil.
	3 Chem.	3 N. Hist.	2 Pol. Ec.
12	3 Greek.	3 Greek.	3 Greek.
	3 Latin.	3 Latin.	3 Latin.
	2 German.	3 German.	3 F. Arts.
	2 French.	3 Phil.	3 Phil.
13	3 Greek.	3 Greek.	3 Italian.
	2 Latin.	3 Pol. Ec.	3 Pol. Ec.
	1 Phil.		3 Phil.
	2 History.	4 History.	3 History.
	2 French.	3 N. Hist.	[3 R. Law.]
14	2 Greek.	3 Greek.	7 English.
	2 Latin.	3 Pol. Ec.	
	2 Phil.	3 Phil.	3 Phil.
	3 German.	3 N. Hist.	2 N. Hist.
	1 French.		
15	3 Greek.	5 Greek.	6 Greek.
	3 Latin.	4 Latin.	3 Latin.
	2 Math.	3 Pol. Ec.	3 Sanskrit.
	2 Chem.	[3 F. Arts.]	[3 Phil.]
16	2 Latin.	[3 Pol. Ec.]	3 Phil.
	2 German.	6 German.	3 History.
	3 French.	3 Italian.	3 Italian.
	3 Spanish.	3 Spanish.	3 Spanish.
17	5 Greek.	3 Greek.	2 Greek.
	5 Latin.	3 Latin.	2 Latin.
		2 Classics.	3 F. Arts.
		2 English.	3 English.
		2 History.	2 Pol. Ec.
18	3 Latin.		
	3 History.	6 History.	7 History.
	2 Phil.	3 Phil.	
	2 Math.	2 Pol. Ec.	2 Dante.
		3 F. Arts.	3 F. Arts.
19	4 Greek.	3 Greek.	4 English.
	2 Latin.	3 Latin.	2 Latin.
	3 History.	3 Pol. Ec.	3 F. Arts.
	1 Phil.	3 Phil.	3 Phil.
20	2 French.	3 F. Arts.	3 History.
	3 Math.	3 Math.	[3 Math.]
	3 Chem.	6 N. Hist.	9 N. Hist.
	2 Phil.	1 Physics.	
		1 Music.	

	Hours taken in Soph. Year.	Hours taken in Junior Year.	Hours taken in Senior Year.
21	3 German. 1 French. 6 N. Hist.	1 German. 3 Italian. 5 N. Hist. 3 Pol. Ec.	3 Italian. 6 N. Hist. 3 Pol. Ec.
22	3 Math. 1 Music. 1 F. Arts. [3 Chem.]	3 Math. 6 Music. [3 Phys.] 3 Chem.	6 Math. 6 Chem.
23	3 Greek. 4 Latin. 3 Pol. Ec.	2 Greek. 1 Latin. 3 Phil. 3 History. 3 French.	3 Greek. 3 Latin. 3 Pol. Ec. 3 History. [3 French.]
24	3 Greek. 3 Latin. 2 German. 2 N. Hist.	4 Greek. 2 Latin. 3 German. 3 History. [3 Pol. Ec.]	4 Greek. 4 Latin. 4 German. [3 History.]
25	3 Greek. 3 Latin. 1 Phil. 3 History.	3 English. 3 Latin. 6 Phil. 2 Pol. Ec.	9 Phil. 3 F. Arts.
26	3 Latin. 2 German. 2 French. 3 Phil.	3 German. 3 Pol. Ec. 3 History. 3 N. Hist.	3 Pol. Ec. 6 Phil. 3 N. Hist.
27	3 Latin. 2 German. 3 Pol. Ec. 2 Math.	3 Latin. 3 German. 3 Pol. Ec. 3 N. Hist.	1 Latin. 3 History. 2 Phil. 3 N. Hist. 3 F. Arts.
28	6 Math. 3 Chem. 1 N. Hist.	3 Math. 6 Chem. 3 Physics.	3 Math.. 3 Chem. 6 Physics.
29	3 Greek. 3 Latin. 3 French. 1 Phil.	3 Greek. 4 Latin. 3 F. Arts. 3 Pol. Ec. 1 Physics.	2 Greek. 3 Latin. 4 English. 3 Pol. Ec. [3 History.]
30	2 Latin. 1 German. 1 French. 3 History. 2 Math. 1 Phil.	6 History. 6 F. Arts. 1 Pol. Ec.	6 History. 3 F. Arts. 3 Music.
31	2 Greek. 3 German. 2 Math. 3 Chem.	3 Phil. 6 History. [3 Pol. Ec.] 3 N. Hist.	3 Phil. 2 History. 3 Pol. Ec. 1 English. 3 R. Law.
32	6 Greek. 4 Latin.	3 English. 3 French. 3 Phil. 3 History.	4 English. 3 Hebrew. 3 Phil. 3 N. Hist.
33	3 Greek. 4 Latin. 3 English.	2 Greek. 4 Latin. 3 German. 3 Pol. Ec.	3 Phil. 6 History. 1 English. 2 Pol. Ec.
34	2 Greek. 2 Latin. 5 German. 1 French.	3 Italian. 3 Pol. Ec. 3 N. Hist. 3 F. Arts.	3 Pol. Ec. 6 History. 3 F. Arts.
35	2 German. 2 Math. 3 Chem. 3 Physics.	3 Math. 6 Chem. 3 N. Hist.	3 Phil. 3 Math. 3 Chem. 3 N. Hist,
36	3 Greek. 3 Latin. 2 German. [2 French.] 2 Math.	3 German. 3 Physics. 3 Math. 3 Chem.	2 English. 3 Italian. 2 N. Hist. 5 Math.
37	2 Latin. 2 German. 3 French. [2 Math.] 3 Chem.	3 German. 3 French. 3 Pol. Ec. 3 N. Hist.	3 German. 3 French. 3 History. 3 N. Hist.
38	2 Latin. 3 History. 2 Math. 3 Physics.	3 F. Arts. 3 History. 3 Pol. Ec. 3 N. Hist.	3 F. Arts. 3 History. 3 Phil. 3 English.
39	3 Greek. 3 Latin. 3 German. 1 French.	3 Sanskrit. 6 Latin. 3 French.	3 Greek. [3 Latin.] 9 German.
40	3 Latin. 3 German. 1 French. 3 Pol. Ec.	3 Latin. 3 German. 3 Italian. 3 Pol. Ec.	3 Spanish. 3 German. 3 Italian. 3 R. Law.

In order to exhibit fully the changes produced by the development of the elective system in the relative amount of attention given to different subjects, a much more thorough analysis of the facts would be necessary than can be given at this time. As an indication, however, of the extent to which the balance of studies is affected, I have prepared the following statement, showing the number of students of the three upper classes engaged in each of the several departments of study in the year 1874–75 and in the year 1879–80. It will be understood that this is a statement simply of the number of individuals at work, without respect to the number of hours or of courses taken by each. Thus, in 1879–80 twenty-two Seniors studied Greek; but some of the number pursued but one course, while others pursued several. It should also be observed that the introductory courses in philosophy and history, which were studies prescribed for all in 1874–75, have since been made elective courses, and are therefore separated for both years from the advanced courses in the same departments. In making any comparison, moreover, it must be remembered that in several departments important additions have been made to the number of courses offered, — as, for example, in English, German and chemistry, — and also that the amount of elective work required from each student has been raised by changes or omissions in prescribed

	1874-75.				1879-80.			
	208 Soph.	159 Jun.	152 Sen.	Total.	196 Soph.	201 Jun.	171 Sen.	Total.
Hebrew	....	....	2	2	1	1	2	4
Sanskrit	....	....	2	2	....	2	1	3
Philology	....	....	....	....	8	4	....	12
Greek	97	29	19	145	102	53	22	177
Latin	137	64	81	282	133	48	37	218
English	13	8	6	27	42	52	37	131
German	106	61	33	200	184	94	84	262
French	59	67	29	155	84	59	17	160
Italian	19	18	6	43	9	31	33	73
Spanish	7	6	16	29	4	12	24	40
Introd. Philosophy	....	Class.	....	....	56	46	....	102
Philosophy	....	41	57	98	6	29	38	73
Ethics	1	11	29	41	9	38	50	97
Political Economy	3	45	80	128	20	98	44	162
Introductory History	Class.	....	....	....	78	5	....	83
History	51	67	78	196	9	87	98	194
Roman Law	....	1	14	15	....	3	17	20
Fine Arts	11	19	30	60	10	55	59	124
Music	5	5	5	15	24	22	18	64
Mathematics	71	18	3	92	32	21	14	67
Physics	2	34	14	50	18	18	10	46
Chemistry	52	26	25	103	59	60	12	131
Natural History	51	56	38	145	61	101	74	236

studies from eight hours to twelve in the Sophomore year, and from eleven hours to fourteen in the Junior year.

As a general result of this comparison, while some of the traditional studies have gained and others have fallen off, that class of studies upon the whole have lost but little ground, and, allowance being made for temporary fluctuations, may fairly be said to retain their hold upon the attention of students unimpaired. The additional time secured for elective work has been used largely in diversifying the range of studies, and has enabled many students to give a certain share of attention to subjects formerly little dwelt upon in a college course. But the general result exhibits no tendency to the extinction of some classes of studies and the absorption of attention by others. The mass of students may be trusted, in their selection of studies, to have regard to serious considerations; and, while this is the case, courses of study will continue to be elected for their recognized intrinsic worth, and every branch of sound knowledge will continue to have its due proportion of followers.

During the latter part of the College year, the attention of the Faculty was chiefly taken up by a thorough revision of the rules and regulations. For a considerable number of years, the tendency had been strong in favor of the simplification of rules and of the omission of all minute provisions. Many once familiar injunctions and prohibitions had been dropped, without injury to the order of the College, and without diminution of the recognized authority of the Faculty, or of its ability to deal with any subject of real importance to discipline. The regulations had thus lost their old character as a penal code, containing a strict enumeration of possible offences, and the time had come for recasting in consistent form such portions of them as it was necessary to retain. The result of this revision is that the new rules are for the most part a body of instructions, informing the student of the steps to be taken by him in order to qualify himself for a degree or for any academic honors. The enumeration of acts which are offences only because they are prohibited is reduced to the lowest point which seemed practicable, while breaches of generally recognized rules of right, propriety, or good order are left without provision, to be dealt with at the discretion and by the general authority of the Faculty, as has been done heretofore in many cases not covered by positive regulation. In all cases, specific penalties and regulations suggesting a line up to which failure of duty or breach of discipline may be safely carried have been struck out, in order to offer no temptation for a kind of calculation of results which is believed to place the student in an essentially wrong attitude of mind towards his regular duties.

A change of great importance is also made in the method of dealing with students found to be seriously deficient in their studies. Under the rules heretofore followed, any student who was found at the close of any year to have received less than forty per cent of the total maximum mark could not count the year as advancing him towards his degree; or, in other words, was dropped into the next lower class. This heavy penalty for a general deficiency in scholarship was independent of the consequences of failure in any study taken by itself, and, unlike the latter, could not be removed by subsequent diligence, but was irrevocable and final. Once dropped from his own class, the student had no possibility of graduating with them, and although under the system of elective studies his practical separation from his former classmates might not be complete, the day came when their course was finished and a year's study still remained due from him. Most of the cases calling for the application of this rule occurred at the close of the Freshman year; but, as previous reports have shown, such cases have been found and acted upon at the close of other years, and even at the close of the Senior year. This irreversible penalty was no doubt regarded with serious apprehension by idle students, and its influence as a stimulus was looked upon by the Faculty as of especial importance in the Freshman year, when it is often necessary for instructors to deal with some refractory material. But it was felt that the destruction of all hope of recovering his position was sometimes an injury to the individual who was dropped, and the Faculty determined therefore to try the experiment of opening the way for return to his class, without, however, abolishing the penalty itself. This has been done by a general rule, providing that no student shall be advanced to the next higher class, as *e.g.* from the Freshman to the Sophomore class, who is deficient in studies amounting to more than seven hours of recitation per week. The Freshman, therefore, who is found deficient to that extent at the end of the year, must in the succeeding year be again classed as a Freshman. The way for a return to his former class is open, whenever, in addition to his regular work, he shall have reduced the deficiency in his record below seven hours per week, but not otherwise. It is the hope of the Faculty that by this means an incentive to effort may be given to the student who is dropped, by holding out a much-desired reward for increased diligence, without seriously impairing the effects of the penalty upon others.

In this provision, as well as in some others, the new regulation will be found to place the requisitions for a degree in a somewhat altered aspect. The student is now virtually told that the degree is attainable by the successful performance of a certain amount of required and elective work. His recitations and examinations are his opportunities for offering that work, and whatever is successfully performed by him is carried to his credit. His failure in any study is not described as an offence or delinquency, but as an omission to use the opportunity afforded him for presenting certain of the hours of work necessary for the degree, — an omission which his own interest calls upon him to repair as soon as possible. He is in effect told to regard his success in a given study, not as mere compliance with a demand made by the Faculty, but as a distinct step towards an end which he is striving to reach, and is accordingly encouraged to use the forethought and consideration naturally required of one who is working for a distant object.

The theory of crediting the student with work done, rather than charging him with deficiencies, logically implies the possibility of advancing from one class to the next any student who performs work by anticipation, and of thus reducing the number of years spent in College. For example, a student when admitted to College may, in addition to the requisitions for admission, offer himself for examination on any part of the Freshman year's work, as in several cases above referred to. Heretofore such additional examinations enabled the student to take elective studies in place of the studies anticipated, but did not advance him towards his degree in point of time, unless they were sufficient to substantially cover the ground of the Freshman year and thus qualify the student for admission to the Sophomore class. The natural operation of the theory embodied in the new regulations would be to enable the student in any such case, with the help of extra work performed and credited in some subsequent year, to secure his degree in three years instead of four. The objection to a practice of this kind would be that under some circumstances, particularly when pecuniary difficulties are felt, an unhealthy inducement towards overwork might be created. The Faculty preferred accordingly to make no general regulation on this subject, but to retain in their own hands the power of dealing with every proposal for anticipation of work as its special conditions might seem to require. The few exceptional cases which have heretofore occurred show that a gain of time by the student is sometimes possible, but also show the necessity for caution.

The revision of the regulations also made it necessary for the Faculty to act decisively upon the rules respecting attendance at recitations. The previously existing regulations contained an elaborate system of penalties for absence, applicable to the Freshman and Sophomore classes, exempted from all such regulation those Juniors and Seniors whose rank was above seventy per cent, and subjected the remainder of the Juniors and Seniors to penalties only in case of excessive absence. Both the compulsory and the voluntary part of these arrangements had become unsatisfactory. The provisions for enforcing attendance by penalties had become mechanical in their operation in process of time, and had ceased to promote a proper sense of obligation on the part of the student. The rules for the exemption from penalties of Juniors and Seniors standing above a fixed line, originally applied to Seniors alone, were adopted, as was stated in my Report for 1876–77, as a provisional system only, and, when extended to Juniors in the next year, were still regarded as imperfect and experimental. Dealing with the subject in the light of a considerable experience, the Faculty determined to adopt the simple provision with respect to students of all classes, that habitual absence is *prima facie* evidence that the student is not fulfilling the purposes of his residence at the University, and calls for inquiry, explanation, and such action as may be found to be fitted to the special circumstances; and that irregularity of attendance, unless accompanied by good scholarship, is to be regarded and treated in the same way. No scale of penalties is stated and no precise line of absences or scholarship is given, the design of the rule being to deal with individuals and not with sharply defined classes, and to deal with them by such flexible methods as are necessary, in distinguishing between cases where the student proves his capacity to act upon his own responsibility and those where he needs more or less support from discipline. The application of such a system necessarily implies a much closer supervision of individuals and a greater exercise of personal influence and of discretion on the part of those charged with its administration, than is required under any scheme of fixed rules; and it is accordingly provided that the oversight of the Freshman class as regards attendance shall be entrusted to a committee of Freshman instructors, and that the other classes shall be under the charge of the administrative officers of the College, the Faculty reserving the power of decision as to the action called for by the reports of these committees.

In the revision of the regulations, as well as in the system of elective study, the Faculty have had constantly in view the purpose of encouraging young men when approaching their majority to act upon their own responsibility, and to learn to make a considerate and profitable use of that full liberty of action which they are so soon to enjoy. The results already attained justify the belief that by this means, without loss of scholarly attainment or of regularity of work, the College may still more effectively perform its duty in the formation of character and the preparation of its students for the duties of life.

CHARLES F. DUNBAR, *Dean.*

To the President of the University:

Sir, — I have the honor to submit the following report on the condition of the Graduate Department of the University.

As no report has heretofore proceeded from this Department, it seems to be desirable that I should take the occasion to present a brief sketch of its history. The residence of graduates at the University for the purpose of pursuing advanced studies is a practice probably as old as the College itself. Traces of it are to be found in the ancient records of the Faculty; and it has always been felt that the presence of such persons, even when their connection with the University has been of the slightest kind, has had a tendency to heighten the serious scholarly feeling of the place. At the time of the foundation of the Scientific

School, under the administration of President Everett, one of the main objects had in view was the provision of instruction suited to the wants of the most advanced students; and it will be remembered that, in the first organization of that School, philological studies were represented in the Faculty as well as the natural and practical sciences. In point of fact, the Scientific School did, within the boundaries to which it was soon restricted, fulfil an important function in regard to higher work, and had a considerable influence in preparing the way for what is now the Graduate department. Until the great extension of the elective system of the College ten years ago, and the establishment of the degrees of Ph.D. and S.D. somewhat later, it was the only department of the University that offered the opportunity of obtaining a degree by the performance of special work of a high character in pure science. It was resorted to by college graduates and other advanced students who desired to make a real beginning of a scientific career, as a brief glance at the Quinquennial Catalogue will show. Its opportunities of study, under professors of rare eminence, not overburdened with undergraduate work, and eager to promote genuine scientific achievement, were exceptionally fine, though inadequately represented in any printed record; and the degree of the School soon attained a very high estimation.

The next step that was taken towards the provision of instruction for graduates was the institution of the system of "University Lectures" during the administration of President Felton. Early in 1863, under the presidency of Dr. Hill, these courses of lectures, having been partially discontinued, were resumed on a plan of increased extent and efficiency; and at the same time it was ordered by the Corporation that "the President, with the professors in all departments of the University, be authorized to meet and associate themselves in one body for the consideration of its educational interests, and for the arrangement of such courses of lectures as may be thought expedient for the benefit of the members of the professional schools, graduates of this or other colleges, teachers of the public schools of the Commonwealth, and other persons." This was the beginning of the Academic Council, which continued to meet at regular intervals during the years 1863–69, inclusive. Their chief business at that time was to superintend the programmes of University lectures, which included many courses of high value and interest in all departments of learning; but they also, in conformity with their organic rule, and with the useful practice which still exists, gave their attention, as occasion arose, to questions connected with the general interests of the University, where the opinions of members of different faculties might fitly be brought into comparison with each other.

At the opening of the present administration a settled purpose was manifested to establish the instruction of advanced special students on a permanent and efficient footing; and for the year 1869–70 two well filled-out courses in Philosophy and in Modern Literature were offered to "graduates, teachers, and other competent persons." In the Annual Catalogue for 1870–71 it was announced that "The degree of Master of Arts will not be given in course after Commencement, 1872. Thereafter an examination will be held annually for the awarding of this degree." The present rules concerning the degree of A.M., and the then newly established degrees of Ph.D. and S.D., were adopted by the Corporation and Overseers in January and February, 1872; and at the same time the Academic Council was revived, enlarged by the addition of the assistant and adjunct professors of the University, and empowered to make recommendations for the above-named degrees.

Up to the close of the academic year 1879–80, forty-nine meetings of the Academic Council had been held under the new organization; one hundred and fifteen persons had been admitted to candidacy for the degree of A.M., of whom seventy have received the degree (forty-nine in academic studies, nineteen in law, and two in medicine), and two still remain on the list of candidates; seventy-five persons had been admitted to candidacy for the degree of Ph.D., of whom twenty-five have attained the degree, three have taken the degree of A.M., and nine are still candidates; and twelve had been admitted to candidacy for the degree of S.D., of whom six have received the degree, and three are still candidates. The last President's Report contains a complete list of all those on whom the degree of Ph.D. or S.D. has been conferred down to Commencement, 1879, inclusive. It is to be noted that the degree of Ph.D., according to the custom of the European universities, includes the degree of A.M.

Under our elective system it is impossible to draw a sharp line of distinction between studies suitable for graduates and those which belong to undergraduates. The list of college courses contains a considerable number which can only be taken by advanced students in some special line; and, again, a candidate for the degree of A.M. is often properly desirous of pursuing some branch of study he has hitherto been obliged to neglect, or even of dividing his attention among several branches, rather than of continuing in a path on which he has already made important progress. But in 1877–78 it was determined to form a separate list of such studies as were regarded as primarily for the benefit of graduates, and at the same time to throw more of the force of the University into the work of higher instruction. This list is now prepared yearly under the auspices of the Academic Council. It comprised, in the Catalogue of 1879–80, forty-five courses. Candidates for the degree of A.M. are generally in attendance on College or graduate courses. Candidates for the degrees of Ph.D. and S.D. still do a part, and in some cases the whole, of their work outside of the regular courses, under the more or less frequent private advice and assistance of professors; and this is likely to be always the best course for such students to pursue. All the College and graduate courses are open, on the payment of certain fees, to graduates of this and other colleges, whether candidates for a degree or not.

In the year 1873–74 three fellowships for graduates were established from the bequest of John Parker, Jr., and one fellowship, called the Kirkland Fellowship, from the gift of Hon. George Bancroft; and in 1877–78 the number of Parker Fellowships was increased to four. These fellowships are bestowed, according to the design of their founders, under most liberal conditions. The object of Mr. Parker's bequest is declared in his will to be "to provide the most thorough education possible for persons who possess uncommon powers in any department of knowledge, or who give promise of developing such powers, but who have not at command the means of paying for a prolonged and costly training." They are open to graduates of any department of the University. The Kirkland Fellowship does not even require graduation; but the incumbent must, as a rule, have resided at least three years at the University as a member either of the College or of one of the Schools. It may be awarded, in the language of the founder, to "any young person likely to distinguish himself in either of the learned professions, or in any branch of Science, or in Architecture, Sculpture, Painting, Music, or Letters." The appointments to these fellowships are made each year on nomination by the Academic Council; and the same appointment may be twice renewed. The incumbents may, and generally do, pursue their studies abroad. Besides these provisions for graduates, there are the Harris Fellowship and the Graduates' Scholarship, founded several years earlier, for which the College Faculty nominate, and which are restricted to graduates of the College. The incumbents of these fellowships also may reside abroad, if specially authorized to do so by the Faculty. All these foundations have proved to be most valuable additions to the resources of the University; and there is every reason to feel satisfaction with the results that have been derived from them.

The following is a summary of the state of the department during the year 1879–80: —

Fourteen persons were admitted to candidacy for the degree of A.M.; and the whole number of candidates for the year was twenty, of whom fourteen attained the degree, four withdrew, and two are still candidates. Seven persons were admitted to candidacy for the degree of Ph.D.; and the whole number of candidates for the year was nineteen, of whom five received the degree, five withdrew, and nine are still candidates. Two persons were admitted to candidacy for the degree of S.D., and three persons were, and still are, candidates. The names of those on whom the degrees of A.M. and Ph.D. were conferred at Commencement, 1880, are as follows: —

A.M.

Francis Almy, A.B., 1879.
Clement Walker Andrews, A.B., 1879.
Harrison Otis Apthorp, A.B., 1879.
Robert S. Avann, A.B., 1877.
Henry Baily, A.B., 1879.
Frank Hagar Bigelow, A.B., 1873.
Walter Cary, A.B., 1879.
Stedman Willard Clary, A.B., 1877.
James Arthur Gage, A.B., 1879.
James Ward Gilman, A.B., 1877.
Benjamin Fosdick Harding, A.B., 1879.
Edward Lovell Houghton, A.B., 1879.
Benjamin Rand, A.B., 1879.
Francis Joseph Swayze, A.B., 1879.

Ph.D.

EDWARD PERKINS CHANNING, A.B., 1878.

Department, History. *Subject*, The Political History of the United States from the End of the Revolutionary War to the War of 1812. *Thesis*, "The Louisiana Purchase."

EDWARD EMERSON PHILLIPS, A.B., 1878.

Department, Philology. *Subject*, The Greek Language and Literature. *Thesis*, "On the Historic Worth of Aeschines's Oration on the Embassy."

DENMAN WALDO ROSS, A.B., 1875.

Department, History. *Subject*, The History of Early Institutions. *Thesis*, "The Theory of Village Communities."

SAMUEL EPES TURNER, A.B., 1869.

Department, History. *Subject*, The History of Germany, France, and England, from A. D. 800 to A. D. 1800, with special reference to the age of Louis XIV. *Thesis*, "The Influence of France on English and German Politics during the Age of Louis XIV."

BENJAMIN WILLIS WELLS, A.B., 1877.

Department, Philology. *Subject*, The Comparative Grammar of the Germanic Dialects, with special reference to English, Gothic, and High German. *Thesis*, "The Language of the Ormulum, and its Relations with Old English."

The Parker Fellowships, during the year 1879–80, were held by

James Greenleaf Croswell, A.B., 1873,
Benjamin Osgood Peirce, A.B., 1876, Ph.D. (*Leipzig*), 1879,
John Henry Wheeler, A.M., 1875, Ph.D. (*Bonn*), 1879,
Ernest Young, Ph.D., 1876;

and the Kirkland Fellowship by

Oscar Roland Jackson, A.B., 1876.

Doctors Peirce, Wheeler, and Young resigned their fellowships at the end of the academic year. Messrs. Peirce and Wheeler, it will be seen, have taken the degree of Ph.D. during their residence in Germany; and both have highly distinguished themselves there, the former in the department of Mathematical Physics, the latter in that of Greek Philology. Dr. Young took the degree of Ph.D. in History before going abroad, and he, too, has done excellent credit to his university during his incumbency of a fellowship.

Messrs. Croswell and Jackson received reappointment to their fellowships for the year 1880–81; and the following new incumbents of Parker Fellowships were appointed: —

Joseph Silas Diller, S.B., 1879,
Washington Irving Stringham, A.B., 1877,
Ph.D. (*Johns Hopkins Univ.*) 1880,
George Lincoln Walton, A.B., 1875, M.D., 1880.

Mr. Robert Noxon Toppan (A.B. 1858) has offered, in the Graduate Department of the University, a prize of one hundred and fifty dollars, for the best essay on some subject connected with political science. This liberal proposal is made as an experiment, — to see if the serious study of special subjects by advanced students can be promoted by the offer of prizes.

In conclusion, I desire to call attention to the value of the Academic Council in bringing together into one body the professors of the whole University, and thus helping to foster a sense of unity, and a mutual understanding and respect among its several departments. It will doubtless be found possible, with the progress of time, to make still more extensive use than has yet been made of the opportunities of consultation thus afforded, and to draw from the Council important aid for the elevation, the liberalizing, and the harmonizing of our system.

JAMES MILLS PEIRCE, *Secretary of the Academic Council.*

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — As Dean of the Theological Faculty, I respectfully submit the following report for the academic year 1879–80. Twenty-four students were connected with the School during the year. Of these, one dissolved his connection with the School, very early in the year, on account of ill health; one did not join it till late, and his name, therefore, did not appear in the Catalogue. The students were thus distributed: —

Senior Class	6
Middle ,,	7
Junior ,,	7
Special ,,	4

Of these, sixteen, precisely two thirds, had college degrees. The number of graduates from the School was five. Of these, one had been a member, nominally, of the Middle Class. He had, however, done the work of the three years in two. Of the Senior Class two did not graduate; one because he had not offered himself for examination in Hebrew, and another because he was not prepared in German. One special student would unquestionably have graduated, but he was taken ill at the time of the examinations. While the number of special students was larger than

Instructor.	Subjects and Methods of Study.	Number of Students.	No. of Exercises per Week.
	JUNIOR CLASS.		
Prof. Everett.	Homiletics, Lectures and Exercises.	7	1
Prof. Abbot.	Textual Criticism and Exegesis of Gospel of Matthew, from the first to the thirteenth chapter inclusive. — Lectures and Recitations. Dissertations by students.	7	2
Prof. Young.	The Hebrew Language, Grammar, and Translation. Chapters in Joel, Isaiah, Jeremiah, and Ecclesiastes were read, and some of the Psalms. There were exercises on the black-board, frequent drilling upon the roots, and upon words similar in sound but dissimilar in meaning. Text-books, Biblia Hebraica, Gesenius', Fürst's, or Davies' Lexicon, and Gesenius' Grammar.	11	8
Mr. Allen.	Ecclesiastical History, First Period, to end of eighth century; Lectures, with discussions, and constant reference to original sources.	7	2
Mr. Howison.	Philosophical Basis of Theology. Mill's Essays on Religion were used as a starting-point for Criticism, Discussion, and Lectures. Elaborate Essays were written by the students.	8	1
Mr. Ticknor.	Elocution.	7	1
	MIDDLE CLASS.		
Prof. Everett.	Homiletics, Sermons preached by students before two upper classes and criticised by students and teacher.	18	1
Prof. Everett.	Comparative Theology; Studies of the Vedic, Avestan, Buddhist, and Chinese Religions; Lectures, with constant reference to works reserved for the use of the students.	7	2
Prof. Abbot.	New Testament; Exegesis of the Gospel of Matthew, chapters xi.–xxviii., and of the Epistle to the Romans, chapters i.–iii.	7	2
Prof. Young.	Hebrew Language and Literature. Select passages were read from various books, especially those which are often mistranslated and misinterpreted, and those that have been misquoted in the New Testament. Half the time was devoted to reading at sight.	9	2

MIDDLE CLASS — CONTINUED.

Mr. Allen.	Ecclesiastical History, Second Period, from ninth to fifteenth century inclusive. Chief authorities, Milman's Latin Christianity and Greenwood's Cathedra Petri. The students were also referred to other sources. — Lectures and Discussions. Essays by students.	7	2
Mr. Howison.	Ethics; Abbott's Translation of Kant's Practical Reason, with Lectures.	10	2
Mr. Ticknor.	Elocution, each student twenty minutes a week.		

SENIOR CLASS.

Prof. Everett.	Systematic Theology; Lectures. Essays by students.	8	2
Prof. Everett.	Homiletics, with the Middle Class as above.	13	1
Prof. Abbot.	New Testament; Exegesis of Epistle to the Romans, chapters viii.–xvi., to the Galatians i.–ii., Acts xv., and the Gospel of John i.–iii., with Critical Introductions.	8	2
Prof. Young.	Old Testament; Lectures on the Pentateuch, the formation of the Canon, the Psalter and the Prophets; a Survey of Jewish History and Chronology, and of the Ancient and Modern Customs of the Jews.	8	2
Mr. Allen.	Ecclesiastical History, Third Period, from beginning of sixteenth century to the present time; Lectures and Discussions.	6	2
Mr. Ticknor.	Elocution. Each student twenty-five minutes a week.		
Mr. Gordon.	Charities and Reforms; eight Lectures, open to all students.		

GENERAL EXERCISES.

Preaching by some student every Friday evening, open to the public; the sermon carefully prepared and submitted in advance to the teacher of Homiletics.

Extempore speaking once in two weeks by two students, on a subject approved by the Faculty; each speaker being criticised by members of the Faculty in the presence of the School.

Conference meeting, conducted by students, the Faculty being present, once in two weeks (alternating with the above).

Morning prayers, conducted by students and teachers.

it had been the year before, the character of these students was the same — that is, they were, for the most part, men of good culture, who entered as special students in order to arrange their studies according to their own taste, two of them intending ultimately to graduate, and a third having the same result in contemplation. As, owing to the small number of instructors, the elective system has not been introduced into the School, the position of special student is the only one in which is found that freedom in choice and arrangement of work which the elective system offers to undergraduates. Besides the Divinity students, several other gentlemen attended the exercises of the school. Of these, six studied Hebrew, namely, four undergraduates, one candidate for the degree of A.M., and one for that of Ph.D.; and four attended the exercises of Mr. Howison, namely, one candidate for the Master's Degree, two Law Students, and one clergyman, otherwise unconnected with the University.

The nature of the work of the School, and its amount, may be learned from the accompanying table, pp. 80, 81. The most noticeable event in the history of the School during the year has been the resignation of Professor Young, who for eleven years had held the position of Hancock Professor of Hebrew, and Dexter Lecturer on Biblical Literature. The loss of an experienced teacher in a study requiring such special and profound learning might, ordinarily, occasion serious interruption to the work of the School. It is, however, fortunate in having secured the services of Crawford Howell Toy, D.D., LL.D., to whose hands the interests of the department may be safely committed. The School was also fortunate in securing for the year the services of George H. Howison, A.M., recently a professor in the Boston School of Technology. His exercises were especially valuable in stimulating the thought of the students.

A subject was last year, I believe, for the first time, introduced into the instruction of the School, which, it is to be hoped, may hereafter fill a much larger place. I refer to the subject of "Charities and Reforms," which the Rev. G. A. Gordon of Milwaukee presented in eight lectures. Mr. Gordon, both by study and experience, was fitted for this work. The theme is one which no person proposing to himself the office of a Christian minister can afford to neglect. The minister should be a leader, or at least an intelligent worker, in the great movements for the amelioration of society; and it is very fitting that a Divinity School should give special attention to the preparation for this branch of a minister's work. Of course the few lectures of Mr. Gordon could do little more than call the attention of students to the topics treated, and excite their interest in them; but even this was well worth the doing.

Six hundred volumes were added to the Library during the year. The Reference Room, which was spoken of in my last Report, has become absolutely indispensable to the work of the School. Its usefulness is still further enhanced by the fact that, by the consent of the College Librarian, books needed for reference are transferred from Gore Hall to this room, so that they are accessible to students at any time during the day and evening.

I am happy to be able to announce the completion of the proposed fund "for the further endowment of the Harvard Divinity School;" the one hundred and thirty thousand dollars that were asked for two years ago having been subscribed, and ten thousand dollars more. I cannot express too strongly the gratitude of the Faculty for this generous exhibition of interest in the objects of the school, and of confidence in its methods and plans.

C. C. EVERETT, *Dean*.

To the President of the University: —

Sir, — I beg to submit the following Report upon the Law School for the academic year 1879–80: —

The table on pp. 84, 85 gives the courses of study and instruction during the year, the names of the instructors, the text-books used, the number of exercises per week in each course, and the number of students who offered themselves for examination in each course at the end of the year.

At the beginning of the year the Faculty voted that Moot Courts as a stated exercise be suspended during the year. The immediate occasion for this vote was the additional amount of instruction assumed by the several professors, consequent upon the establishment of the three years' course. It was regarded, however, as an experiment which might result in the abolition of Moot Courts as a stated exercise, some members of the Faculty having long doubted the utility of retaining them. With a view

Studies.	Instructors.	Text-books.	Exercises per week.	Number of students examined.
FIRST YEAR.				
Real Property.	Prof. Gray.	No text-book.	Two.	60
Contracts.	Prof. Langdell.	Langdell's Cases on Contracts.	Three.	78
Torts.	Mr. Howland	Ames's Cases on Torts.	Three.	67
Criminal Law and Criminal Procedure.	Prof. Thayer.	No text-book.	One.	60
Civil Procedure at Common Law.	Prof. Ames.	Ames's Cases on Pleading.	One.	64
SECOND YEAR.				
HONOR COURSE.				
Evidence.	Prof. Thayer.	No text-book.	Two.	17
Jurisdiction and Procedure in Equity.	Prof. Ames.	Langdell's Cases in Equity Pleading.	Two.	17
Property.	Prof. Gray.	No text-book.	Two.	17
Trusts and Mortgages.	Prof. Ames.	No text-book.	Two.	17
ORDINARY COURSE.				
Elective Subjects.				
Evidence.	Prof. Thayer.	No text-book.	Two.	16
Jurisdiction and Procedure in Equity.	Prof. Ames.	Langdell's Cases in Equity Pleading.	Two.	6
Property.	Prof. Gray.	No text-book.	Two.	15
Trusts and Mortgages.	Prof. Ames.	No text-book.	Two.	7
Sales of Personal Property.	Prof. Thayer.	Langdell's Cases on Sales.	Two.	10
Bills of Exchange and Promissory Notes.	Prof. Langdell.	Ames's Cases on Bills and Notes.	Two.	9

THIRD YEAR.

HONOR COURSE.

Required Subjects.

Jurisdiction and Procedure in Equity.	Prof. Langdell.	Langdell's Cases on Equity Jurisdiction.	One.	8
Partnership and Corporations.	Prof. Ames.	No text-book.	Two.	8

Elective Subjects.

Sales of Personal Property.	Prof. Thayer.	Langdell's Cases on Sales.	Two.	7
Bills of Exchange and Promissory Notes.	Prof. Langdell.	Ames's Cases on Bills and Notes.	Two.	7
Conflict of Laws.	Prof. Gray.	No text-book.	One.*	8
Constitutional Law.	Prof. Thayer.	No text-book.	One.†	8
Agency and Carriers.	Prof. Thayer.	No text-book.	One.	7
Wills and Administration.	Prof. Gray.	No text-book.	One.	7
Jurisprudence.	Prof. Gray.	Austin on Jurisprudence.	One.	8

ORDINARY COURSE.

Elective Subjects.

Jurisdiction and Procedure in Equity.	Prof. Langdell.	Langdell's Cases on Equity Jurisdiction.	One.	8
Partnership and Corporations.	Prof. Ames.	No text-book.	Two.	14
Conflict of Laws.	Prof. Gray.	No text-book.	One.*	2
Constitutional Law.	Prof. Thayer.	No text-book.	One.†	2
Agency and Carriers.	Prof. Thayer.	No text-book.	One.	7
Wills and Administration.	Prof. Gray.	No text-book.	One.	11
Jurisprudence.	Prof. Gray.	Austin on Jurisprudence.	One.	
Sales of Personal Property.	Prof. Thayer.	Langdell's Cases on Sales.	Two.	11
Bills of Exchange and Promissory Notes.	Prof. Langdell.	Ames's Cases on Bills and Notes.	Two.	7

* For the first half of the year.

† For the last half of the year.

to trying the experiment more thoroughly, the several instructors announced to their classes their readiness to hear Moot Courts as a voluntary exercise; and the result was that four Moot Courts were held during the year, one by each of the professors.

The whole number of students connected with the School during the year was one hundred and seventy-seven. Of these, one hundred and thirty-eight were in the School during the whole of the year, twenty during two thirds of the year, and nineteen during one third of the year; making an average of one hundred and fifty-seven and a fraction, being three and a fraction more than in the preceding year. Of the thirty-nine who were in the School only a part of the year, twenty-three entered at the beginning of the year and left during the year.

The number of students who were entitled to enter the third-year class as candidates for a degree at the beginning of the year now under review, was thirty-nine. Of these thirty-nine, sixteen remained in the School during the year and presented themselves for examination in June last, of whom thirteen passed and received degrees, and three failed. Five also of the twenty-three who did not remain in the School during the year, having been in the School two years in all, presented themselves for examination, of whom four passed and received degrees, and one failed. Of the thirty-nine who were entitled to enter the third-year class as candidates for a degree, twelve were entitled to become candidates for the honor degree. Seven of these were among the sixteen who remained in the School during the year, and six of them received the honor degree, the other receiving the ordinary degree. Two others of the twelve who were entitled to become candidates for the honor degree were among the five who presented themselves for examination without having been in the School during the year; one of whom received the honor degree, the other not becoming a candidate for it, and receiving the ordinary degree.

At the annual examination in June, 1879, thirty-seven students passed their examinations in the studies of the first year, twenty-four others having tried and failed. At the examination for advanced standing in September, 1879, three of those who had failed in June presented themselves and passed. Three new candidates also presented themselves at that examination, of whom two passed and one was rejected. Therefore, the whole number of students who were entitled to enter the second-year class in September, 1879, as candidates for a degree, was forty-two. Twenty-eight of these, having remained in the School during the year, presented themselves in June last for examination in the studies of the second year, and all but two of them passed satisfactory examinations, and so became entitled to enter the third-year class in September last as candidates for a degree. Seventeen of the twenty-eight presented themselves in the honor course, of whom seven obtained the average necessary to entitle them to the honor degree.

At the annual examination in June last, there were seventy-one applicants for examination in the studies of the first year, of whom fifty-five passed and sixteen failed. Of the sixteen who failed in June, seven presented themselves and passed at the examination for advanced standing in September. Of the nine who failed to pass at either examination, six were special students, and of the sixty-one who passed, twelve were special students.

The number of applicants for admission to the School as candidates for a degree upon examination, during the year now under review, was twenty-five, of whom thirteen were admitted and twelve were rejected. Of the thirteen who were admitted, one was excused from passing an examination in languages on account of examinations passed by him in the College.

It is still too early to draw any trustworthy conclusions as to the effect upon the numbers of the School of the examination for admission and the lengthening of the course to three years. In the year 1878–79, the first-year class was small (61), and that fact has affected the numbers of the School unfavorably ever since; for it rendered the second-year class small (32), during the year now under review, and the third-year class (13), during the now current year. On the other hand, the first-year class, during the year under review, was large (75), and hence the second-year class during the current year is large (57). Again, during the current year the first-year class is small (57), and its smallness will affect the numbers of the School unfavorably during the next two years. These facts show the great extent to which the School has become dependent upon Harvard graduates; for they are more than accounted for by the difference in the numbers of Harvard graduates who have entered the School during the three years just referred to respectively. Thus, the number of Harvard graduates who entered during the year 1878–79 was thirty-eight, being nine less than in each of the two years immediately preceding. In the year under review, the Harvard graduates who entered reached the unprecedented number of fifty-nine, while the number who have thus far entered during the current year has again dropped to thirty-eight. I know of no way of accounting for these anomalies. So far as I have been able to learn, they are entirely accidental. Perhaps, however, such sudden changes are not an unnatural consequence of the rapid increase in the number of Harvard graduates who have entered the School during the last few years. In 1872–73, only twenty-two Harvard graduates entered the School, and the number had stood at about that figure for many years. In seven years, therefore, namely, from 1872 to 1879, the number of Harvard graduates entering the School increased nearly threefold. It could not be expected that so rapid a growth would be very regular.

C. C. LANGDELL, *Dean*.

DECEMBER, 1880.

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR: — As Dean of the Medical Faculty I submit the following Report upon the Medical School for the Academic year 1879–80.

The whole number of students in attendance during the year was two hundred and sixty-three; during the first term two hundred and fifty-six; during the second two hundred and thirty-nine. Of these, one hundred and twenty-one had a literary or scientific degree. There were seventy-four applicants for the degree of Doctor of Medicine, of whom ten withdrew their names, and nineteen were rejected. Forty-five passed the examinations, and received their degrees.

The Scholarships were awarded to Buchanan Burr and Edward Pearson Elliot of the Third Class, and to Charles Goddard Stearns and George Clarence Shepard of the Second Class.

The following table shows the amount and character of the instruction given: —

COURSES OF INSTRUCTION FOR 1879–80.

Instructors.	Subjects.	Number of Exercises.
	FIRST CLASS.	
Prof. Holmes	Descriptive Anatomy	Four times a week till May.
Drs. Beach, Waterman, & M. H. Richardson	Practical Anatomy with Exercises in Dissection	Ten times a week from January till May.
Drs. Dwight & Quincy	Laboratory Exercises in Histology	Twice a week till May.
Prof. Bowditch	Systematic and Experimental Physiology	Four times a week.
Dr. Garland	Laboratory Exercises in Experimental Physiology	Twice a week for 5 weeks.
Dr. Hills	General and Analytical Chemistry	Twice a week, with ten additional exercises.
Dr. Hills	Practical Exercises in the Laboratory for General Chemistry	Daily.
	SECOND CLASS.	
Prof. Cheever	Regional Anatomy	Twice a week for 8 weeks.
Drs. Beach, Waterman, & M. H. Richardson	Practical Anatomy, with Exercises in Dissection	Ten times a week till Jan.
Prof. Wood	Medical and Toxicological Chemistry	Twice a week.
Prof. Wood	Practical Exercises in the Laboratory for Medical Chemistry	Daily.
Mr. Markoe	Materia Medica, with Practical Demonstrations	Once a week.
Prof. Fitz	General Pathology and Pathological Anatomy	Twice a week.
Prof. Fitz	Special Pathological Anatomy, with Demonstrations	Twice a week.
Prof. Fitz & Dr. Cutler	Laboratory Exercises in Pathological Histology	Twice a week till April.
Prof. Fitz & Dr. Cutler	Practical Instruction in Performing Autopsies	Throughout the year.
Prof. Ellis	Clinical Medicine	Three times a week with an additional weekly exercise during the first half-year.
Drs Mason, Whittier, & Shattuck	Practical Instruction in Auscultation and Percussion	Daily during the first half-year.
Dr. Knight	Practical Diagnosis and Treatment of Diseases of the Larynx	Daily during the first half-year.
Dr. Warren	Recitations in Surgical Pathology	Once a week during the first half-year.
Dr. Warren	Recitations in Surgery	Once a week during the second half-year.
Dr. Warren	The Application of Bandages and Apparatus	Once a week during the second half-year.
Drs. Warren & W. S. Bigelow	Laboratory Exercises in Surgical Histology	Twice a week after Mar.
Prof. Bigelow	Clinical Surgery	Once a week till March.
Prof. Cheever	Clinical Surgery	Twice a week till April.
Dr. Porter	Clinical Surgery	Once a week after Feb.
	THIRD CLASS.	
Prof. Edes	Therapeutics	Three times a week.
Prof. Reynolds	Theory and Practice of Obstetrics	Twice a week.
Dr. W. L. Richardson	Recitations in the Theory and Practice of Obstetrics	Once a week.
Dr. W. L. Richardson	Practical Exercises in Operative Obstetrics	Twelve.
Dr. W. L. Richardson	Practical Instruction in Clinical Obstetrics	Throughout the year.
Prof. Minot	Theory and Practice of Physic	Five times a week.
Prof. Ellis	Clinical Medicine	Three times a week, with an additional weekly exercise during the first half-year.

COURSES OF INSTRUCTION — CONTINUED.

Instructors.	Subjects.	Number of Exercises.
	THIRD CLASS — CONTINUED.	
Dr. Knight	Practical Diagnosis and Treatment of Diseases of the Larynx.	Daily till May in second half-year.
Prof. Bigelow	Surgery and Clinical Surgery	Twice a week till March.
Prof. Cheever	Clinical Surgery	Twice a week till April.
Drs. Porter & W. S. Bigelow	Practical Exercises in Operative Surgery	Twelve exercises of three hours each.
Prof. Williams	Diseases of the Eye	Once a week.
Prof. Williams	Clinical Ophthalmology	Once a week till January and after March.
Prof. White	Diseases of the Skin	Once a week.
Prof. White	Clinical Dermatology	Once a week.
Dr. Baker	Diseases of Women	Twice a week during the first half-year.
Dr. Baker	Clinical Gynæcology	October 1 till April 1 twice a week
Dr. Baker	Operative Gynæcology.	Twenty-four practical exercises of one hour each.
Dr. Greenough	Practical Diagnosis and Treatment of Syphilis	Once a week during the first half-year.
Dr. Wigglesworth	Practical Diagnosis and Treatment of Syphilis	Once a week during the second half-year.
Dr. Green	Practical Diagnosis and Treatment of Diseases of the Ear	Once a week from January till April.
Dr. Blake	Anatomy, Physiology, and Diseases of the Ear	Twice a week for three months.
Dr. J. P. Oliver	Practical Diagnosis and Treatment of Diseases of Children	Once a week during the first half-year.
Dr. Rotch	Practical Diagnosis and Treatment of Diseases of Children	Once a week.
Dr. Webber	Practical Diagnosis and Treatment of Diseases of the Nervous System	Once a week till Feb.
Dr. J. J. Putnam	Practical Diagnosis and Treatment of Diseases of the Nervous System	Once a week.
Dr. Folsom	Mental Diseases	Eight.
Dr. Folsom	Hygiene	Eight.
Dr. Draper	Forensic Medicine, with Demonstrations	Twelve.

The results of the examinations for admission to the School since their establishment in 1877 are given in the following table: —

	1877.				1878.				1879.				1880.			
	June.		Sept.		June.		Sept.		June.		Sept.		June.		Sept.	
	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.	Offered.	Conditioned.
Physics	13	5	25	3	22	4	41	18	23	5	24	7	15	3	24	8
Latin	9	2	16	5	12	2	22	10	10	3	11	3	8	4	11	6
French.......	4	1	8	1	8	1	18	0	13	3	9	0	7	3	10	3
German	0	0	1	1	2	1	2	2	0	0	2	0	0	0	2	0
Total rejected	2		1		4		5		2		3		3		5	

JUNE EXAMINATIONS.

STATISTICS OF REJECTION.

		FIRST CLASS.						SECOND CLASS.						THIRD CLASS.													
		Anatomy.		Physiology.		General Chemistry.		Medical Chemistry.		Materia Medica.		Path. Anatomy.		Theory and Practice.		Clinical Medicine.		Surgery.		Clinical Surgery.		Therapeutics.		Obstetrics.	
			Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.		Per ct.
1877	Passed	63		46		42		45		44		47		52		50		57		46		49		51	
	Rejected	14	19	29	38	26	38	9	16	12	21	12	25	5	8	8	13	0	0	5	9	10	16	6	10
	Total	71		75		68		54		56		59		57		58		57		51		59		57	
1878	Passed	56		52		49		54		52		56		53		53		51		54		48		36	
	Rejected	17	23	25	32	14	22	8	12	13	20	11	16	3	5	7	11	0	0	0	0	4	7	21	36
	Total	73		77		63		62		65		67		56		60		51		54		52		57	
1879	Passed	73		59		33		64		57		59		56		64		58		60		57		51	
	Rejected	15	17	36	37	36	52	11	14	17	22	11	15	0	0	1	1	3	4	1	1	11	16	9	15
	Total	88		95		69		75		74		70		56		65		61		61		68		60	
1880	Passed	77		81		52		46		70		62		58		53		65		59		56		56	
	Rejected	15	16	27	25	15	22	11	19	13	15	11	15	9	13	10	15	1	1	11	15	13	18	9	13
	Total	92		108		67		57		83		73		67		63		66		70		69		65	

In the foregoing table will be found the statistics of rejections at the annual examinations of the School in June for the past four years.

The general recognition by intelligent students of the advantages of spending the whole time to be devoted to medical study in a school properly equipped for giving instruction, was shown by the table published last year, and is confirmed by the statistics of this.

NUMBER OF TERMS SPENT AT THE SCHOOL BY GRADUATES.

	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.
Spent six terms...	3 5%	8	22	14 47%	25 69%	40 65%	41 85%	62 88%	89 86%
Spent five terms..	0	3	2	7	5 13%	9	4	2 2%	1 2%
Spent four terms..	8 14%	8	6	6	4 11%	8	8	3 4%	4 8%
Spent three terms	18 32%	15	5	0	2 5%	1	0	2 2%	0
Spent two terms..	27 48%	7	3	8 10%	0	3	0	1 1%	1 2%
Total graduated	56	41	38	80	86	61	48	70	45

During the year two important steps have been taken; viz., an addition has been made to the requirements for entrance, and a fourth year's course has been established. The last-named measure was of pressing necessity, — three years of study having proved altogether inadequate for a proper mastery of the numerous branches taught in the School.

CALVIN ELLIS, *Dean*.

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — The following report upon the Dental School for the year 1879–80, is respectfully submitted: —

The number of students was fourteen, of whom two were third-year, two second-year, and ten first-year students.

The first-year class attends the lectures of the first year in the Medical School, and therefore received the same instruction in its studies, viz.: Anatomy, by lectures and dissection, Physiology and General Chemistry, with abundant laboratory work.

Twelve lectures in Surgical Pathology by the Professor of Clinical Surgery, and two lectures in Oral Surgery by the

Professor of Surgery, given to the Medical Class, have also been attended by the second and third year students as a part of their regular course.

In the Out Patients' Department of the Massachusetts General Hospital, to which the Infirmary of the Dental School belongs, the usual clinical instruction has been given by the instructors in Operative Dentistry, assisted by the Demonstrator in that department. Patients have been numerous, far exceeding the ability of the class to attend to all their needs, by reason of the fewness of the operating students; but on this very account it has been possible for the instructors to bestow greater personal attention on each student.

Lectures have also been given by the Professor on the theory and modes of practice of Operative Dentistry. The Demonstrator and one of the instructors have been present on the afternoons of five days of every week during the term, to oversee the students while performing the operations, and give clinics and assistance when occasion demanded.

In the Mechanical Department two hours of each week have been devoted to instruction by the Professor, one hour to lectures, and one to clinical instruction in the laboratory. The Demonstrator has been present from nine till twelve of five days of every week throughout the term for clinical teaching and assistance. Patients have not been wanting at any time, and opportunities in abundance have offered for practice in every branch of this department.

Dr. Henry F. Dunkel, Demonstrator of Operative and Dr. Geo. F. Grant, Demonstrator of Mechanical Dentistry, have performed their duties with fidelity and success. I regret to report that broken health compelled Dr. Dunkel's resignation at the end of the year of a position for which by his experience and character he possessed peculiar fitness.

Dr. Arthur T. Cabot, Instructor in Oral Surgery and Pathology, has given instruction in his department for one hour or more of each week, using the microscope for his demonstrations. He has also taught the use and management of the microscope, together with the preparation and staining of sections. He also, I regret to say, has felt compelled by press of other work to resign his position.

Dr. Brackett, Instructor in Dental Therapeutics, has devoted an hour or more of each alternate week to instruction in his department, accompanied by exhibition of the drugs and materials used, of which he has presented to the School a valuable collection.

The graduating class consisted of five members, of whom two were from the class of 1878. Of the first-year class, two left during the year on account of sickness, two failed to pass the examinations, and two have left to enter the Medical School.

THOS. H. CHANDLER, *Dean.*

DECEMBER 7, 1880.

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — I have the honor to submit the following report upon the Lawrence Scientific School for the academic year 1879–80: —

The number of students registered during the year was seventeen. They were classified as follows: five in Engineering, three in Natural History, one in Mathematics, eight in special courses.

Mr. F. W. Dean gave instruction in Spherical Trigonometry and Analytical Geometry, one hour daily, five days in the week. Howison's Analytical Geometry was used as a text-book.

Mr. F. W. Dean also gave instruction in Mechanical Drawing and Surveying. The course in Mechanical Drawing included problems in Descriptive Geometry, Plotting Surveys, Isometric Projections, Machine Drawing and Tinting, and occupied six hours a week. In Surveying, Gillespie's Treatise and Henck's Field Book were the text-books used. The exercises consisted of recitations and field practice with the compass, transit, and level.

Instruction in Physical Geography and Geology was given by Mr. W. M. Davis. The exercises consisted of recitations, lectures, and field work, three times a week.

In Geology and Palæontology, Professor Shaler gave one elementary course and three graduate courses. In each of these courses the exercises consisted of recitations and lectures three times a week, with laboratory work and excursions.

Dr. Faxon and Dr. Mark gave courses of lectures in Zoölogy, with laboratory exercises, twice a week.

Dr. Goodale gave a course of lectures in Botany, with laboratory exercises, three times a week.

In Physics, the exercises consisted of a course in Elementary Physics, under Mr. Robert Willson; a course in Experimental

Physics, under Assistant Professor Trowbridge; and a course of lectures, three times a week, by Professor Gibbs, on Light and Heat.

Assistant Professor Jackson gave a course in descriptive Chemistry, with laboratory practice, three times a week.

One student attended the course in Freshman Algebra, under Assistant Professor C. J. White, and the course in History, under Dr. Emerton.

In German, instruction was given by Mr. E. S. Sheldon and Mr. H. B. Hodges.

In French, instruction was given by Assistant Professor Jacquinot.

The first year's class in Engineering had three exercises a week, under Professor Eustis, in Descriptive Geometry, and its applications to shades, shadows, perspective, and stereotomy. This course was attended by three Seniors of the undergraduate department.

Professor Eustis gave instruction five hours a week, to students of the third year in Engineering, in Theoretical and Applied Mechanics. The text-books used were Weisbach's Mechanics, with notes on the strength of materials, and Wood's Bridges and Roofs.

Professor Eustis also gave instruction, five hours a week, to students of the fourth year in Engineering. Rankine's Applied Mechanics and Rankine's Engineering were the text-books used.

Two persons received the degree of C.E. at Commencement.

H. L. EUSTIS, *Dean.*

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — As Director of the Botanic Garden, I have the honor to submit the following Report for the academic year 1879–80: —

Upon taking charge of the Garden, in September, 1879, it became my duty to provide conveniences at Cambridge for the propagation of herbaceous plants. For the past six years such plants had been raised in the greenhouses used by the Arnold Arboretum at the Bussey Institution in Jamaica Plain, and at a suitable time in spring, had been brought to Cambridge for planting in the open air. Although this method was good while the Garden and Arboretum were under one management, no reason appeared for its continuance after their separation. As none of the greenhouses in the Garden could be advantageously employed for the purpose of propagating, it was necessary to erect a new one specially fitted for this object.

Means to build this house were supplied without encroaching upon the Garden fund. The new greenhouse is of good capacity and has proved to be convenient, and well adapted to its purpose. A house for succulent plants, and a large frame for Cape bulbs and the like, are connected with it, and are economically heated from the same boiler. In the immediate vicinity of this range of houses, cold frames sufficient for our present wants have been prepared. So far as can be judged by the results of the year, the plan of raising plants in the Garden has worked well.

The dilapidated greenhouse above the upper terrace has been partly rebuilt, and is now a serviceable and substantial structure. Such repairs as were absolutely necessary in the other houses have been made, but two at least in the range — the Palm House and the Stove — must be wholly reconstructed at no very distant day.

The past year has been one of great drought and therefore of severe trial for the Garden. From the records kept at the observatory, less than five hundred feet distant, it appears that the rainfall for the months of April, May, and June, 1880, was only $4\frac{81}{100}$ inches. These months are the most critical for herbaceous plants, especially annuals. For forty years previous, the average rainfall in the three months named has been $10\frac{95}{100}$ inches, and, with the exception of 1880, the minimum amount is $5\frac{18}{100}$ (in 1844). Comparison of the three last academic years shows that the rainfall from September 1 to the last of August following has been for

1877-8	$52\frac{45}{100}$	inches
1878-9	$47\frac{1}{100}$	,,
1879-80	$34\frac{22}{100}$	,,

Owing to the unremitting attention of the head gardener, Mr. William Falconer, the loss of plants from drought has been comparatively slight.

During the year an effort was made by the Professors of Botany to establish more intimate relations between the Garden and the Gray Herbarium. The Overseers acceded to their request to appoint a committee of gentlemen interested in Botany and Horticulture, who should visit the Garden and Herbarium, and report thereon to the Board. No formal meeting of the committee was held; but several of its members have visited the grounds and buildings, and have attentively considered certain questions. They expressed their surprise upon learning that Dr. Gray, though not in receipt of a salary beyond his house-rent, was bearing the expense of a Curator for the Herbarium he had presented to the University. It was informally advised by the members of the committee then present, that the Curator of the Herbarium should also have duties connected with the nomenclature of the Garden, by which a portion of his salary might be provided for. Owing to Mr. Watson's absence during the summer, the arrangement has not yet had a fair trial. In several other matters, also, the counsel of the committee has been of service.

The Garden has continued to receive plants by gift, purchase, and exchange. It will be seen, from the previous reports upon this subject, that the exchanges of the Garden have been heretofore more or less combined with those of the Arnold Arboretum. Upon the separation of the administration of the Arboretum from that of the Garden, it was thought best to adopt for the Garden the plan which has been found of use in the Museum of Comparative Zoölogy, by which only true desiderata are sent and received. The system has secured cordial coöperation, so far as it has been put in practice.

From the Garden and greenhouses large numbers of plants have been furnished for the electives in Botany. The course in Biology also has been supplied with flowering plants and ferns, and a graduate elective has been provided with the plants required for physiological experiments.

It will not escape notice that the period comprised within our academic year is precisely that least adapted to the advantageous study of Elementary Botany. The year opens with the coming of the early frosts and closes when the plants are well in flower. On this account Dr. Gray, in 1870, opened the laboratory for instruction during a part of the summer vacation. The summer classes have been continued up to the present year, but have not yet secured the attendance of more than half a dozen undergraduates. The classes have been chiefly composed of teachers in Colleges and High Schools, and the results have been in various ways satisfactory; but unless some plan can be suggested by which the course can obtain the attendance of a fair number of our own students, it will hardly be considered expedient to continue it. If the course extending through six weeks, five days being occupied each week, could with proper safeguards be made an equivalent for a two-hours' elective in College, it might attract those students who would like to study flowering plants in the summer, and thereby secure time for outside reading and for other College work during term time.

It is my duty to call attention to the immediate necessity of providing accommodations for our advanced students in the botanical electives. The laboratory and lecture-room, built in 1871 through the generosity of H. H. Hunnewell, Esq., are admirably adapted to purposes of general instruction, and for demonstrations in practical analysis. But with the growth of the University our classes have outgrown the accommodations which were ample ten years ago. We are obliged to admit, of course, to our two rooms the large class of beginners, and our advanced students now occupy such space as the beginners leave them. But this joint occupation forbids satisfactory work by either class. Moreover, the laboratory is not yet adequately furnished with necessary appliances for investigation. A commodious building of low cost, equipped with the requisite apparatus and instruments of research, and established upon a modest but sufficient endowment, is an urgent need. At present, the instructors in General and Cryptogamic Botany have no rooms which they can employ exclusively for research; and they therefore unite in expressing the wish that some friend of the University may soon place at their disposal facilities for giving advanced instruction and for conducting investigations.

The Herbarium and Botanical Library have received numerous accessions during the year. The new building for the Library is convenient, and adds much to the comfort of those consulting the Herbarium.

A very large and important collection of the useful products of plants, chiefly East Indian, has been received from the Museum of the Royal Gardens, Kew, England. We have also obtained a complete set of the vegetable products enumerated in the new edition of the United States Pharmacopœia. The accumulation of specimens of great value in the illustration of Economic Botany, especially pharmaceutical, has been rapid of late; but we have hardly any room for storing them, much less any space for their display.

During the early months of the year, an attempt was made to increase the endowment of the Garden. Established in 1807, upon an inadequate endowment, the Garden has always led a precarious existence, and at times has been in very straitened circumstances. The funds which it now possesses are insufficient for its support even upon its present basis, and it has been compelled to rely largely upon annual gifts. It has been the recipient of considerable sums of money at different times, but chiefly for the purpose of providing for some pressing need. In the belief that it was neither prudent nor dignified for the Garden to pursue further such a policy, an earnest appeal was made for a substantial endowment. By the aid of Mr. Agassiz, an amount somewhat exceeding twenty thousand dollars has been subscribed. One thousand dollars of the subscription was employed by permission of its giver, John Amory Lowell, Esq., for expenditure during the fiscal year. Mr. Lowell's benefactions to the Garden cover many years, and have at times been its chief dependence.

Owing to the distractions of the current year, it was thought best to suspend the solicitation for the increase of the endowment during the summer and autumn, but the efforts are now to be resumed.

The great and increasing usefulness of the Garden as an aid in University instruction, and as a means of exciting more interest in Natural History throughout the community, is well understood, and there can be little doubt that the appeal in its behalf will meet with an adequate response.

GEORGE LINCOLN GOODALE, *Director*.

DECEMBER, 1880.

TO THE PRESIDENT OF THE UNIVERSITY:—

SIR,—I respectfully submit the following report upon the Bussey Institution for the year 1879–80:—

The number of students in attendance was seven, of whom one was a special student in Applied Zoölogy and six were in regular standing. Three of them will be candidates for the degree of the School in 1881.

Instruction was given in Agriculture by Mr. Motley; in Horticulture, by Mr. Watson; in Botany, by Mr. Faxon; in Entomology, by Mr. Burgess; in Applied Zoölogy by Professor Slade; in Histology, by Mr. Ford, and in Agricultural Chemistry and Chemical Analysis, by Professor Storer. All these courses were systematic and thorough, and most of them lasted throughout the year. Several of them were of quite exceptional excellence. A new dissecting room fitted up in November, 1879, gave the department of Applied Zoölogy much better facilities than it had possessed before for teaching the anatomy of domestic animals. From November until May abundant opportunity was given for the practical dissection of horses and various other animals, under the supervision of Professor Slade and his Demonstrator, Mr. Ford. The students recognized very clearly the great advantages of this course of instruction, and diligently improved them. It is matter for congratulation that the instruction at the Bussey Institution, far from having deteriorated on account of the pecuniary difficulties through which the School has been passing, was really better and ampler this year than ever before. It is not at all probable that any school in the country gives as abundant instruction in Agriculture and Horticulture and the sciences which relate to these arts as is now given at the Bussey Institution, and it is greatly to be wished that the farming community could be informed of the character of this instruction; but, in the multiplicity of so-called Agricultural Colleges which are scattered throughout the country, it is no easy matter to bring home to the would-be student of agriculture the advantages which are here offered him. The zeal with which those sons of farmers who have hitherto studied at the Bussey Institution have availed themselves of its advantages, and the high esteem in which all of them hold the School, is good evidence that its teachings are well suited to the needs of practical men.

F. H. STORER, *Dean.*

JAMAICA PLAIN, Nov. 26, 1880.

To the President of the University: —

Sir, — I have the honor to submit the following report upon the condition and progress of the Arnold Arboretum during the year ending August 31, 1880.

The permanent planting of the collections of living plants has again been delayed. It was expected that, at least, a portion of the collections in nursery could have been arranged during the year. The negotiations, however, with the city of Boston, referred to in my last Report, for a joint occupancy of the Arboretum by the University and the City, in connection with the system of public parks, are still pending. Public opinion now seems to strongly favor such an arrangement, but as it would, if carried into effect, modify the boundaries of the Arboretum, and considerably enlarge the area to be treated, it is not practicable to begin planting the collections until this arrangement is either finally adopted or rejected.

This delay is greatly to be regretted. It postpones the real work and usefulness of the Arboretum, which, in one direction, can only begin when it is arranged and opened to the public. Many of the trees in the nurseries have reached or are fast approaching a size which will preclude their successful removal into permanent positions; so that much of the earlier work of preparation must be recommenced unless a definite decision in regard to the future of the Arboretum is soon reached.

On the other hand, such a delay is not without its advantages. The success of the Arboretum in its scientific and ornamental aspects will largely depend upon the manner in which the trees are originally arranged; for, unlike other museums an Arboretum cannot be remodelled or enlarged from time to time to make room for new additions. Specimens once planted cannot be moved again. The first arrangement cannot be tentative: it must be final, and should not only place each tree in the position, within certain limits, best suited to it, but it must provide places in the general system for all probable additions.

Too much time can hardly be given to these preliminary studies; and if the Arboretum, as a collection of trees, has lost something in time, it has gained in another direction; and those whose duty it will be to solve the problems of the final arrangement will bring to this work larger experiences and the advantage of wider observation.

During the year, the work of enlarging and improving the nurseries has been continued; and several important additions have been made to the collections. A belt containing 1,005 ornamental trees of great variety has been planted along the southern boundary of the Arboretum; and 550 young forest-trees, principally larch, have been planted in different parts of the permanent woodlands devoted to experimental sylviculture.

The thinning of the original woodlands, with the view of their improvement by the gradual substitution of young and vigorous trees of the best varieties for old and dying ones, has been continued during the year, and has produced 139 cords of wood. During the year, 522 squares of excellent peat have been dug and stacked for future use.

The interchange of plants and seeds with other botanical and horticultural establishments has been continued during the year. There have been 3,151 plants and 409 packets of seeds distributed as follows: to all parts of the United States, 1,557 plants and 205 packets of seeds; to Great Britain, 899 plants and 48 packets of seeds; to the continent of Europe, 642 plants and 139 packets of seeds; to Japan, 1 packet of seeds; to India, 4 packets of seeds; to New Zealand and Australia, 5 packets of seeds.

There have been contributed during the year 3,081 plants and 524 packets of seeds from 31 donors.

The separation of the Arboretum from the Botanic Garden, and its distance from the collections at Cambridge, have made the establishment of a separate Herbarium and Museum essential to its scientific position. The Museum is intended to illustrate the economic properties of trees both native and exotic; and the Herbarium will contain a reference set of ligneous plants to aid the determination of the living collections. A library of works on Dendrology and kindred subjects is also essential to the proper working of the Arboretum, and has been commenced.

Work in these new departments has been pushed with great energy during the year, under the immediate direction of Mr. John Robinson of Salem, who, as Assistant, has given his whole time to it without compensation. Mr. Robinson's report will be found in the Appendix (IV.).

Awaiting the provision of proper accommodations within the grounds of the Arboretum, these collections, which are already of some importance and interest, have been temporarily established in a large vacant house in Brookline lent for the purpose by Mr. Ignatius Sargent. A special feature of the collection is a very full set of American woods.

C. S. SARGENT, *Director.*

BROOKLINE, Sept. 1, 1880.

TO THE PRESIDENT OF THE UNIVERSITY:—

SIR,—During the year the Library has begun and carried forward the second volume of its Bulletin. The bibliographical essays, begun in the previous volume, have been continued, and two new ones have been added. Mr. Scudder furnished one on the "Entomological Libraries of the United States," which has since been printed separately as No. 11 of our *Bibliographical Contributions.* The same gentleman has begun a second on the "Bibliography of Fossil Insects,"—a department of science which he has made peculiarly his own.

I could wish that the income of the Library would warrant an enlargement of the Bulletin, so that this special work might be made more extensive. It is important that the Library should aid in advancing the study of bibliographical science, and it is due to all who are learning how to use large collections of books, that the best guides to such use should be provided from some quarter. The University has about it a body of trained specialists, and through them can greatly help not only resident users of books and students of bibliography, but also the larger constituency of well-wishers and observers, who look to it as a source of encouragement or of direct assistance. The Bulletin has been enabled to do more than could otherwise have been done, by the generosity of Mr. William B. Weeden, of Providence,—a gentleman who finds time amid business pursuits to sympathize with, and effectively promote, such work as scholars are engaged in. I wish to make it known that another acknowledged friend of learning stands ready to help endow this work of the Library, if others will join him; and I trust that in this way an adequate endowment for the Bulletin may be procured. I have thought that the Bulletin might also serve the University as an organ in which record can be made of its progress, and in which first announcements of discoveries in science or intended publications in literature can be noted.

Mr. Arnold, curator of the shelves, with such help as could be afforded him, has continued his work on the classification of the books, and makes the following Report: —

The number of books placed in their permanent position in the new stack during the year, is 17,587, and comprises the following classes: —

Later French Literature	1,203	vols.
German Geog. and Travel, and Swiss Hist., Geog., &c.	295	„
German Literature	2,799	„
English Literature (not yet complete)	4,275	„
British Parliamentary Journals and Papers	3,756	„
British Record Commission Publications, &c.	832	„
Congressional Documents	1,887	„
Added to classes previously arranged	2,540	„
	17,587	„

The whole number of books now reclassified is 52,960, and the number of cards remarked from 200,000 to 250,000.

The arrangement of *German literature* is as follows: —

1. History of Literature and Collections: *a.* General histories of literature. *b.* Literary history by countries, towns, &c. *c.* History and criticism of special classes of literature. *d.* Literary history by periods. *e.* General and special collections and anthologies. *f.* Periodicals of German literary history and criticism.

2. Literature of the Earliest Period: *a.* Collections. *b.* Separate authors.

3. From 1150 to 1350: *a.* Collections. *b.* Prose. *c.* Didactic poetry. *d.* Minnesinger. *e.* Epic poetry.

4. From 1350 to 1525: *a.* Prose. *b.* Drama. *c.* Poetry.

5. From 1525 to 1625.

6. From 1625 to 1725.

7. From 1725 to 1770: *a.* Didactic prose. *b.* Fiction. *c.* Satire. *d.* Poetry. *e.* Klopstock, Wieland, Lessing.

8. From 1770 to 1830: *a.* Herder, Goethe, Schiller. *b.* Poetry. *c.* Fiction. *d.* Prose miscellany.

9. From 1830: *a.* Prose miscellany. *b.* Fiction. *c.* Poetry.

The department of *English literature* is not yet completely arranged, but the part of it already handled is classified as follows: —

1. History of Literature and Collections: *a.* General histories of literature. *b.* History and criticism of special classes, — poetry, drama, fiction, humor, journalism, &c. *c.* Literary history by periods. *d.* Col-

lections and anthologies, — general, poetry, drama, prose, humor. *e.* Works in dialect.

2. Periodicals of English literary history and criticism, and society and club publications.

3. Anglo-Saxon period: *a.* Collections. *b.* Separate authors.

4. From the Conquest to Chaucer.

5. From Chaucer to Elizabeth: *a.* Poetry. *b.* Scottish poetry. *c.* Prose.

6. From Elizabeth to the Restoration: *a.* Shakespeare. (1.) Biography. (2.) Baconian Theory, &c. (3.) Memorial publications. (4.) Bibliography. (5.) General critical works, in chronological order. (6.) Special phases of his genius and learning. (7.) Critical and explanatory notes. (8.) Ireland and Collier controversies. (9.) Grammars, concordances, &c. (10.) Sources of the plays. (11.) Miscellaneous Shakespeariana. (12.) Collected plays. (13.) Selections from the plays. (14.) Separate plays, with illustrative works. (15.) Poems. (16.) Translations. *b.* Early and Elizabethan drama. *c.* Poetry. *d.* Prose.

7. From the Restoration to the death of Pope and Swift: *a.* Poetry. *b.* Drama. *c.* Prose.

8. From the death of Pope and Swift to the French Revolution: *a.* Prose miscellany. *b.* Fiction. *c.* Poetry. *d.* Drama.

In arranging the publications of the British Record Commission and the Master of the Rolls, and also of the various English literary and historical societies and clubs, the uncertainty as to the extent which these collections may assume in future years, and the desirableness of adopting a classified order, rather than one dependent on the date of publication, have caused a variation from the regular practice of giving each book a fixed position and number on the shelves. The Record Commission publications, the Rolls Chronicles, the Calendars of State Papers and Hansard's Debates have been marked with the words *Brit. Hist.*, followed by a serial number, and are placed immediately after the class of British History. The advantages of this arrangement are that the somewhat elaborate classification of these sets can be kept intact without difficulty, as an indefinite number of new volumes can be inserted at any point, and that if this collection should outgrow its present position, it can be removed to a neighboring one without any change of the numbering, while the space thus left unoccupied will be available for the coming periods of British history. In like manner the publications of the literary societies and clubs have been marked *Eng. Lit.*, and placed immediately after the collections of English literature.

The Rolls Chronicles have been classified as follows: —

1. General chronicles, in order of composition. 2. History of special periods, in chronological order. 3. Monastic chronicles, in alphabetical

order. 4. Ecclesiastical history, biography, and literature. 5. Law, &c. 6. Literature and miscellany, in order of composition. 7. Scotland, Ireland, and Wales.

The publications of the Camden Society have been arranged in the following classes: —

1. Political history and biography, in chronological order. 2. Ecclesiastical history and biography. 3. Literature and philology. 4. Miscellany, subdivided into biography and genealogy, customs, travels, topography, &c.

The arrangement of the publications of the Early English Text Society is the one proposed by the Society in its annual reports; namely, romances (subdivided into cycles), moral and religious works in chronological order, miscellaneous in the same order, and philological.

The Parliamentary Papers and the Congressional Documents in the basement of the new book-room have been marked *Brit. Doc.* and *U. S. Doc.*, respectively: the U. S. Documents are arranged by sessions, and the publications of each session in the following order: —

Senate Journal, Senate Executive Documents, Senate Miscellaneous Documents, Senate Reports, House Journal, House Executive Documents, House Miscellaneous, House Reports.

The work of rearranging has now advanced so far, and the general principles of the classification have been applied to so considerable a number of departments, that it is possible to make a more definite statement of those principles, and of the probable ultimate result.

The classes of History, Literature, and Philology will probably require the whole of the new wing for their satisfactory arrangement, leaving the room above the delivery-room for Archæology and Fine Arts, and the old building for Theology, Philosophy, Sociology, Science, and Useful Arts.

The controlling purpose has been to make the new classification coincide, as far as possible, with the special needs of each department of the college instruction, in order to bring within easy reach and in the most convenient order for consultation, with direct reference to actual research, all those books which the instructors and special students in the several departments will wish to use in their own fields. The decisive question, therefore, in determining where any work shall be placed is not so much, Where does this appear in the subject catalogue? as primarily, What department of college instruction has the most frequent need of this work, and therefore the best claim to it? and secondarily, In immediate connection with what other works is it likely to be used? The answer to the first question determines to what general class it shall be assigned; the answer to the second, the definite shelf on which it shall be placed, and its precise position on that shelf.

Thus the arrangement of the literature of each country is primarily by periods, and secondarily by classes, rather than by classes alone, as formerly, for the reason that the first is the ordinary method of study. So also the biographies of political men, collections of speeches, &c., are placed with the history of their period, because they are likely to be most frequently used in connection with historical study. But even if it should appear that the speeches are more used by the department of oratory than by that of history, the historical department would still be regarded as having the best claim to them in the classification, for the reason that their importance for research would still lie in the field of history rather than of oratory.

Thus the Library is practically breaking up into a number of special working libraries, each as complete in itself as the claims of the others will allow. In the case of works which are definitely needed in more than one department, the lack of these in the incomplete departments will be made good as far as possible by the use of references in the shelf-guides, and of dummies on the appropriate shelves indicating the exact position of the missing works.

In the details of the system the prevailing order is the chronological. This is applied minutely not only to the periods of history and literature, but also to general works on any subject, to various editions of an author's works, to different biographies of the same person, and, in general, whenever it can be of real service. The alphabetical order is used as subordinate to the chronological chiefly in the case of biographies, collected works of different authors, and the separate works of a single author, and independently in the local histories of each country or state.

The principles here presented involve no small amount of labor, and may be attended with peculiar liability to errors of judgment, but the approval of those specially concerned in the departments already handled seems to indicate that the result justifies the labor, and the occasional errors (which would be possible enough in any system) can be corrected one by one as they are pointed out.

The continuance of so elaborate an arrangement has been made possible for years to come, on the one side by leaving a large amount of unoccupied space on the shelves, with corresponding breaks in the numbering, and on the other by specifying the character of each shelf at the head of the corresponding page of the shelf-lists, and by the preparation of shelf-guides. These shelf-guides, many of which have already been prepared and placed at the end of their respective rows, are so planned as to show at a glance the general system of classification and its detailed application to each row and range and shelf. At present the shelf-guides are in writing: as soon as they can be printed and bound into volumes, they will furnish a complete guide to the classification which

Row 94.

HARVARD COLLEGE LIBRARY SHELF-GUIDE.

Row 94.

ENGLISH TOPOGRAPHY, AND SCOTTISH AND IRISH HISTORY, GEOGRAPHY, &c.

☞ *The Classification Runs Upward.*

RANGE	1	2	3	4	5	6	7	8	9
SUBJECT DIVISIONS.	ENGLISH TOPOGRAPHY.		SCOTTISH HISTORY.			SCOTTISH GEOGRAPHY, TOPOGRAPHY, &c.	IRISH HISTORY.		IRISH GEOGRAPHY, TOPOGRAPHY, &c.; AND WELSH HISTORY, &c.
	London.	Towns, &c.	General Works.	Earliest period to 16th century.	16th — 19th cent.		Gen. w'ks. & Periods to 18th century.	18th & 19th cent.	
SUB-DIVISIONS BY SHELVES. 8			Strickland's Queens of Scotland						
7	Later Guide Books.	Channel and Coast Islands.	Miscellaneous.	English works on Mary Stuart.		Coast Islands. Towns. G. — Z.	Insurrection of 1798.		*Wales.* Geography, Topography, &c.
6	Earlier Guide Books.	T. — Z.	Burton, Macarthur, &c.	16th century.	19th century.	Towns. A — G. Counties.	18th century.	1870 —	History.
5	Maps. Social Life, &c.	K. — S.	Scott.	Robertson's History.	18th century.	Social Life, &c.	To 18th century.	1800 — 1870.	*Ireland.* Towns. F. — Z.
4	Sketches, &c.	C. — J.	Tytler, Innes, &c.	12th — 15th cent.	17th century.	Travels, Sketches, &c.	General works, (Large vols.)	*Biography, Speeches, &c.* 19th century. B. — Z.	Towns. A. — E.
3	Miscellany.	A. — B.	Early works.	The Highlands.	Letters of Mary Stuart.	Maps & Guide Books.	General works.	19th century. A. — P.	Geography, Travels, &c. (Small vols.)
2	Miscellany, (Large vols.)	Large vols. L. — Z.	Portfolios, &c.	Earliest Period.	Later English w'ks. & French w'ks. on Mary Stuart.	General works.	Large vols.	18th century. G. — Z.	Geography, Travels, &c. (Larger vols.)
1	Large vols.	Large vols. A. — K.	Large vols.	Large vols.	Large vols.	Large vols.	Leland, Plowden, &c.	18th century. A. — F.	Large vols.
NOTES.	General histories of London, in Range 842.								

will be of great service to those who wish to become familiar with the resources of the Library.

The foregoing diagram represents one of the shelf-guides in miniature, and shows the exact proportions of the guides and the relative sizes of the types to be used. The actual size of the guides is 58 by 33 centimeters.

The accessions to the University Library for the year, and the present extent of the various departments, are as follows: —

Departments.	Volumes added.	Extent in	
		Volumes.	Pamphlets.
Gore Hall	4,782	187,300	180,000
Law School	935	19,909	2,700
Scientific School	58	2,819	200
Divinity School	254	19,100	
Medical School	0	2,000	
Museum of Zoölogy	772	14,098	8,500
Observatory	172	2,672	5,000
Botanic Garden	80	3,100	1,300
Bussey Institution	96	2,200	800
Peabody Museum	103	425	560
	7,247	253,123	199,060

Of the accessions to the Gore Hall collection, 1,602 were added by gift, a part of the most important of which came from the library of the late Dr. Charles Pickering, through his widow, who also designated some of the special libraries to receive other portions of the same. The Divinity School also derived a portion of its accessions from the library of the late J. D. Hedge of Providence.

In accordance with a plan mentioned in an earlier report, and with the approval of the corporation, a considerable number of valuable botanical books, likely to be of more use at the Herbarium Library than at Gore Hall, have been transferred to that collection, which has now been rearranged in a new fire-proof apartment. It has also been definitely determined to transfer to Gore Hall from Divinity Hall a very considerable part of the library kept there, in order to insure greater convenience of access, and diminish the risk from fire.

The books in Gore Hall, pertaining to the study of Hebrew, Arabic, and other oriental tongues, have been brought together under the supervision of Professor Toy. To them others have been added from the Divinity School Library, a first step in the contemplated movement. Of this collection, Professor Toy has kindly given me the following: —

STATEMENT OF THE CONDITION OF THE SEMITIC DEPARTMENT.
(LINGUISTIC PART.)

The number of volumes in the University library on Semitic linguistic subjects is somewhat less than 500 (omitting duplicates), distributed as follows: Hebrew and Phœnician grammars and lexicons, 170, literature, 75; Aramaic grammars and lexicons, 20, literature, 5; Arabic grammars and lexicons, 50, literature, 25 (and 20 of translations); grammars and lexicons of Sabean, Ethiopic, and Babylonian-Assyrian, 13; encyclopædias, catalogues of books and MSS., and histories of literature, 90. Most of the books belong to the middle period, — that is, the collection does not embrace the oldest or the newest works, — for example, not the chief native dictionaries and grammars in Arabic, Hebrew, and Syriac, nor the most recent grammars in Hebrew and Arabic. There is a good working apparatus for ordinary purposes, but much is needed to make the collection sufficient for the ends of scholarly research. More particularly, there is needed: 1. A few of the latest grammars and editions in Hebrew and Arabic, and of the most recent dictionaries in Hebrew. 2. Grammars and dictionaries of the modern languages (Arabic, Syriac, Hebrew), and of the dialects (particularly the African languages, Amharic, Tigre, and Tigrina). 3. The native Arabic, Syriac, and Hebrew grammars and lexicons, which supply much of the original material for investigation. In connection with these may be mentioned the great Arabic Cyclopædia (the first of the kind) now being brought out at Beirut by Bistani. 4. A good collection of the literature is indispensable — Arabic and Syriac poetry, history and philosophy, Assyrian inscriptions (particularly the Western Asiatic Inscriptions, edited by Rawlinson), the Jewish Midrash and mediæval rabbinical writings, and the more modern poetry and general literature. The publications in this field are very numerous, and comprise works valuable for historical as well as linguistic purposes, and a good collection of these forms the basis of scientific research. It will be seen from the above list that our library has only a few of them; those that we have are standard works, but there are many important books lacking. Our collection contains no manuscripts. 5. Many valuable monographs have been published of late years, a good collection of which would be of great service.

The Semitic department has the kernel of an excellent collection of books, and may, by care, be made sufficient for all purposes of independent work.

A brief statement may be added of the related department of African languages. This contains about 50 volumes, of which 30 are old Egyptian and Coptic grammars, dictionaries and texts; the remainder are grammars of various African languages. The Egyptian collection, though small, is good. There are needed a number of texts and recent monographs.

Early in the year, after a conference with some of the gentlemen having charge of the forensics and themes of the College course, it was decided to post up in the library notes on the literature of such subjects as were given out for these exercises, and to place the books thus referred to in alcoves, to which the students might have ready access. It was hoped that, by this means, more thorough preparation for writing would be made, and the search for books be conducted with greater economy of time, and with larger freedom from embarrassment and uncertainty. The same work was done in connection with the instruction that is given in the "Oral Discussions," constituting English 6 on the list of College Electives. The result of this endeavor I am pleased to record in the language of Professor Peabody, who has charge of the Senior forensics; of Mr. Perry, who assigns a part of the subjects for Sophomore and Junior themes; and of Professor Hill, who conducts the "Oral Discussions."

Dr. Peabody says: —

"It is impossible to over-estimate the worth of the bibliographical indications and helps furnished for the subjects of forensics. They have inaugurated a revolution. The students in general avail themselves, to the utmost of their receptivity, of this aid. There is not one forensic in ten that does not show painstaking study. I am inclined to think that the average mark for the forensics of the Senior year will be raised at least twenty per cent. I have now in hand nearly two hundred essays, — half of them on Cicero's political history and character, half on the Agrarian laws, — which indicate on the part, at least of three-fourths of the class, an amount of accurate knowledge of important segments of Roman history, which probably was not possessed by any three of previous senior classes. I should wish nothing better as indicative of the utility of such labors as have been bestowed in this direction, than that the library committee should spend an hour or two in looking over the files of forensics to which I have referred. It ought to be remembered that knowledge obtained in this way and thus utilized, written out deliberately, and with the action of the mind upon it, is much more likely to retain its place in the memory than lessons committed merely for the recitation-room, or matter crammed into the memory on the eve of an examination."

Professor Hill says: —

"In my course on Oral Discussion, these references have been of special value as furnishing material for thought, suggesting arguments, and at once stimulating and directing the work of preparation for debate. There is no doubt that, other things being equal, those who make most use of the aids thus furnished acquit themselves the best in the classroom."

Mr. Perry writes: —

"I find considerable improvement in themes since lists of authorities have been prepared. Once or twice really valuable monographs have been given in on a subject which has been illustrated by a copious list of references. So far from unfitting the writers for original work, it seems to me that the aid thus given induces the student to examine different authorities, and to weigh them carefully, instead of blindly following some possibly untrustworthy writer, who has been discovered by chance. The exercise which the students thus get in the practice of research, and in estimating the value of various authorities, seems to me something of the greatest importance. It cannot fail to teach them, what is generally the last thing learned, the proper use of books."

The lending of books to be taken out of the building has been slightly in excess of last year, or 41,986 against 41,296. The hall use shows a falling off from 10,921 to 7,812 of books registered at the desk; but this reduction arises from the large increase in the number of books most in request, to which unobstructed access is now given, and of whose use there is no record. The books registered for both home and hall use at the desk on call-slips, 49,798 in all, do not include the "reserved books" taken out overnight. These last are registered by slip in the same way, but on condition of being taken from the library only at night, and of being returned early in the following morning. They have amounted this year to 10,506 (including also current periodicals) against 7,519 for last year. Adding all these figures, the total loans of books registered for the year is 60,304.

There is another use of books of which we have no registry, though, during this year, we have attempted to form some estimate of it, so far as students are concerned, and to better regulate it. The officers of the University have always been allowed access to the shelves for consultation, — a use now much facilitated by the new classification, — with the shelf-guides, which have been prepared. Students have latterly been admitted to a limited use of this kind, as the following ticket, which has been adopted, shows: —

HARVARD
COLLEGE
LIBRARY.

ADMISSION TO SHELVES.

Name : .... *Date :* ....

Subject : ....

⁂ This permission, good only for its date, entitles the bearer to visit the shelves in the department specified, and *such shelves only*; the general freedom of the Library being expressly reserved. This ticket must be shown on the demand of any officer, and must be surrendered on passing out. It is *absolutely required* that books must be returned to their appointed places according to shelf-numbers.

During the year 60 students have used these cards 340 times. The subjects of investigation were historical in nearly half the cases, and a large share of the remainder were those pertaining to mathematics, music, and fine arts.

The reserving of books by instructors is still an important help to the Library's usefulness. During the year, 35 of the officers of instruction have designated 3,330 volumes to be so marked. They have required the setting apart of eight alcoves, against four last year.

Mr. Kiernan has drawn from our records the following comparative statement of the use of our books now and five years ago, by the same classes of borrowers. The column marked "Whole No.," shows the number of students in each department at the respective dates. The class of "Resident Graduates" includes, beside those so called, unmatriculated students and those studying for a higher degree. The figures are confined to those departments of the University whose members live in Cambridge, and whose use of the Library is considerable.

The result is this: Five years ago 57 per cent of the students used the Library, now 77 per cent use it; each user then, on an average, drew out 14 books, now each user draws out 19 without counting the use "overnight," and 31 if that use be included.

Students of	1874-75.			1879-80.		
	Whole No.	No. taking books.	No. of books taken.	Whole No.	No. taking books.	No. of books taken.
Divinity . . .	20	16	243	23	23	698
Law	139	63	1116	165	119	2,376
Scientific School.	29	21	167	16	15	234
Resid't Graduates	55	18	445	66	40	1,672
Senior Class . .	152	109	2104	171	151	3.400
Junior " . .	159	96	1436	201	168	3,527
Sophomore Class	208	124	1696	196	163	2,683
Freshman "	197	108	942	245	160	1,738
Totals . . .	959	555	8149	1088	839	16,328
" Overnight " use of reserved books						10,506
Total						26,834

The percentage of users among the undergraduates has risen during the same time.

For Seniors	from 71 to 88
For Juniors	" 60 to 83
For Sophomores	" 59 to 83
For Freshmen	" 54 to 65

The number of cards which have been put into the public catalogue varies little from last year, being 35,315 against 36,390. The number of " short cards " prepared is 24,887 against 20,595 for last year. The average of the last eight years being 24,928. I append a statement of conclusions which have been reached regarding the subject catalogue, as furnished by Mr. Scudder : —

"The subject catalogue was planned to aid students in their special researches, and it is admirably adapted to this end to one who is entirely familiar with the principles upon which it is constructed. This familiarity, however, can only be gained by use ; and in the present extent and condition of the catalogue, the beginner is deterred from attempting to gain that familiarity by its complicated system of involved alphabets. To render its use simpler, several devices have already been applied, and others are planned and will be put into execution as soon as possible. They are the result of a prolonged study of all the intricacies in the catalogue, and of such methods of elucidation as could be devised. The 600 or more general subjects under which the cards are ranged will receive distinctive numbers, following the main alphabet in consecutive order.

The subdivisions of each subject will again receive subordinate numbers, separated by a decimal point from the subject number. The figures required in the subordinate number will vary with the subdivision of the subject from one to three, or occasionally four; so that in most cases six or seven, and in some cases eight figures, will be required in complete reference. These numbers will be placed upon the cards, the guide-boards, and the outside of the drawers, and they will be used in the cross references and in a printed index in one alphabet of subjects and subdivision of subjects. The references will thus be simpler, and more readily carried in the mind, in going from one part of the catalogue to the other. The completion of this aid to the student will be delayed by the fact that *pari passu* must be carried on a careful revision of the catalogue itself, since any change made subsequently to the numbering will seriously disarrange the notation, and destroy both its simplicity and efficacy. This is no light undertaking.

"As a further assistance, the four grand divisions into which each subject is theoretically divided will be marked by distinct colors upon the guide-boards, and all lettering upon these guide-boards will be placed in one of four columns, which will indicate respectively the 'branch,' the 'section,' the 'group,' and the number. A brief explanation of this point will be attached to each drawer."

The American maps belonging to the library have all been placed in portfolios, and arranged on sliding shelves. It proves a very rich collection, and I doubt if there exists elsewhere, certainly not in this country, its superior as regards the earlier maps and charts. A new catalogue of them is needed, which would be much more useful if it included similar maps (particularly the earlier ones), which are bound in with early works of geography and history. I have it in contemplation to prepare such a catalogue.

I have mentioned in other reports that the collection of coins in the Library needed further arrangement. We owe to Mr. Robert N. Toppan, of the class of 1858, a valuable series of Roman coins, given by him, and arranged in a handsome case, each coin fitly labelled.

JUSTIN WINSOR, *Librarian.*

GORE HALL, Dec. 1, 1880.

To the President of the University: —

Sir, — The past year has been one of unusual activity at the Observatory. The funds which were recently subscribed for the temporary support of its scientific work have, as was expected, removed all present apprehension of the necessity of restricting either of the principal instruments to merely occasional observations. In fact, while both the Equatorial and the Meridian Circle have continued in regular employment, the increase of our means has permitted many important researches to be conducted with the smaller instruments without interference with the activity of the chief telescopes. I trust that it will appear hereafter that the entire work possesses an interest, and has been pursued with an economy of time and labor, which will do credit to the liberality of those who have provided the necessary means for its continuance. Many of the subscribers have paid in one sum the entire amounts promised during five years. This furnishes the Observatory for the present with an additional fund, the income of which will increase the total amount of the subscription. Of the Annals of the Observatory, the second part of Vol. XI. and Vol. XII. have been completed and distributed during the past year. Good progress has been made with the reductions of recent observations; and many of those made in earlier times have been prepared for publication. The present report will describe successively the work done with the large Equatorial and its subsidiary instruments, with the Meridian Circle, and with the Meridian Photometer; the work connected with the distribution of the standard time signals; the publications of the past year, the volumes now in preparation, the condition of the library, and the improvements in the buildings and grounds.

Large Equatorial. — The observations with this instrument and with others subsidiary to it may be classified by subjects, as follows: —

Satellites of Mars. — While, during the opposition of 1877, the principal observations of these satellites made here were photometric, during that of 1879 their position with respect to Mars was made the chief subject of inquiry. A longer series of observations was obtained here during the past year than was made elsewhere; and, so far as I am aware, Deimos was last seen at this Observatory. The method of reducing the light of Mars by colored glass — which was first employed here during the micrometric measures in 1877 — was again used. It was also adopted during the recent opposition at Washington, and at various foreign observatories. The observations were made almost exclusively by Mr. Wendell and myself. They principally consisted of measurements of position angle; but many measures of distance were also made after the work had been continued for some time. The number of observed position angles of Deimos was 825, of Phobos 278, and that of observed distances 245. The probable error of one setting in the three cases was 0.°6, 0.°9, and 0.″6.

Besides the micrometric work just mentioned, many photometric measures were made, the results of which have been compared with those obtained in 1877, and published in Vol. XI. of the Annals of the Observatory. These measures appear to show that, if we assume the satellites of Mars to have a capacity for reflecting sunlight equal to that of Mars, Deimos has a diameter of about six, and Phobos of about seven miles. Deimos, as is shown by experience at various places as well as here, appeared somewhat brighter in 1879 than in 1877; and in both years it seems to have been brighter measured photometrically, and to have been more readily seen when it followed than when it preceded Mars.

Eclipses of Jupiter's Satellites. — The photometric determination of the times of these eclipses, begun in the summer of 1878, has been regularly continued during the past year. The total number of eclipses thus observed up to Nov. 1, 1880, is 119, of which 60 are of Satellite I., 26 of II., 22 of III., and 11 of IV. The results thus far obtained confirm the hope with which the work was undertaken, — that it would lead to a more precise knowledge of the times of the eclipses than had formerly been attainable. Two eclipses of Satellite I. have been compared by plotting the observations of each, and drawing smooth curves through them. The respective intervals in seconds, from the computed time of the eclipse, at which the satellite had diminished in brightness 1.5, 2.0, 2.5, 3.0, and 3.5 magnitudes, were in the first case +33, +16, +4, —6, —13; in the second case, +40, +18, +6, —2, —9. Regarding these as two sets, each consisting of five independent and equally precise observations, we find that they indicate a change of 3.ˢ8, with a probable error of 0.ˢ6. It, therefore, seems reasonable to hope that in the final reduction, in which proper weight will be assigned to each observation, the time of each eclipse will be determined with a probable error of less than a second. The probable error in observations of the customary kind was found by M. Glasenapp, some years ago, to be between nine and ten seconds. If further experience confirms the expectations now entertained with regard to the photometric method, the eclipses of Jupiter's satellites may again come into use as a means of determining the longitudes of remote stations. The eclipses of the three outer satellites furnish nearly as good results as those of the first, since the greater number of observations attainable compensates a considerable extent for the less rapid variation in brightness.

A new photometer, frequently used in the more recent of these observations, is mentioned under the heading "Variable Stars."

Planetary Nebulæ. — The observations of these objects described in my last report are now nearly completed. Four sets of measures of the light of each nebula are made, the work on each not being confined to one night, and being conducted by different observers, so that the results may be more trustworthy. The spectra of the nebulæ are also observed through a direct-vision prism placed between the object-glass and the eyepiece of the telescope. The planetary nebulæ retain their shape under these circumstances, which obviously indicates that their light is mainly monochromatic. The presence of a continuous spectrum, too faint for observation by a spectroscope of the usual form, is also frequently detected by the method above described.

The difference in the appearance of monochromatic objects and of ordinary stars is so marked when thus examined as to offer a promising method of discovering some small bright nebulæ, which would appear as stars with an ordinary eyepiece. A region where planetary nebulæ were known to be comparatively frequent was accordingly examined with the prism, and three objects of the expected kind were found. Their positions for 1880 are as follows: R. A. $18^h 4^m 19^s$, Dec. —28° 12′; R. A. $18^h 14^m 23^s$, Dec. —26° 53′; R. A. $18^h 25^m 10^s$, Dec. —25° 13′.

A systematic search was accordingly undertaken, and has been completed for about six hundred square degrees. A more rapid survey of the whole heavens has also been begun with the Bowditch Comet-seeker. About an eighth of the visible heavens has thus far been explored. No additional monochromatic objects have been found; but two of the stars examined probably belong to Secchi's fourth type, of which only about fifty were previously known. Their positions for 1880 are in R. A. 19^{h} 55^{m} 16 , Dec. —28° 3′; R. A. 19^{h} 59^{m} 35^{s}, Dec. —27° 34′. R Aquarii seems to be of the same class. Its place for 1880 is in R. A. 23^{h} 37^{m} 37^{s}, Dec. —15° 57′.

The most remarkable discovery, however, is that the spectrum of the star Oeltzen 17681 (the place of which for 1880 is in R. A. 18^{h} 1^{m} 17^{s}, Dec. —21° 1′), possesses a peculiar character. The light of this star is principally concentrated in two points of the spectrum, one in the blue, the other in the yellow, a little more refrangible than the D line. A faint, continuous spectrum is also seen.

By sweeping the telescope over the region, the stars may be examined very rapidly. Over a hundred thousand spectra have already been viewed in this way, and it is expected that by the end of the next year the number observed will exceed half a million.

Variable Stars. — Last summer a remarkable variable star was discovered by M. Ceraski of the Moscow Observatory. This star belongs to the Algol type, of which only five others are as yet known. Its period was announced as about ten days. Dr. Schmidt showed that this time should be divided by two, and gave the period as a little less than five days. Observations made at this Observatory showed that the period should be again divided by two, so that the true period is only two days and a half. The star has also been watched to see that no further subdivision will be made. Photometric measures have been made of the light of the comparison stars, and preparations are now in progress for determining the light curve of the variable photometrically.

The new star in Cygnus was found by Lord Lindsay to consist of monochromatic light, or apparently to have changed into a planetary nebula. This object has now diminished greatly in light, and appears to have lost this peculiarity, and to give a continuous spectrum like that of an ordinary star. Regarding it as a nebula, we seem to have, in this case at least, undoubted evidence of variability.

A new photometer has been constructed for the comparison of stars moderately near each other, but too distant to be brought into the same field by any of the photometers previously in use. The polarized images of the two stars are brought to equality by turning a Nicol prism, and both images are seen under the same conditions. The range of positions in which the double-image prism may be placed is greater in this than in previous photometers made on the same general principle. The instrument has hitherto been used, when attached to the equatorial, for the observation of eclipses of Jupiter's satellites. Its most extensive employment has been in comparisons of β with ω *Persei*, for which purpose it is provided with a small object-glass, and mounted as a separate instrument. The results of these comparisons are, in general, remarkably accordant, and seem to promise a determination of the light curve of β *Persei* with increased precision. Three observers take part in the work, each taking in turn three sets of four settings each, reversing the images in the middle of each set. The average deviation of the sets amounts only to about 0.06 magnitudes. Accordingly, while photometric observations in general give results somewhat less accordant than those obtained by the naked eye under favorable circumstances, this instrument appears to surpass the unaided eye in precision, without losing the advantage common to all good photometers of supplying results independent of each other and reducible to a definite standard.

Miscellaneous. — The places of Hartwig's comet (1880 *d*), and of Iphigenia (112), have been observed by Mr. Wendell. The four first asteroids — Ceres, Pallas, Juno, and Vesta — have likewise been photometrically observed.

The investigation of suitable methods for the detection of stars having a considerable parallax or proper motion, which was proposed by Mr. Searle, has been carried on by him, with the aid of Mr. Wendell as in the previous year, during the few hours, generally towards the end of the night, which could be made available for the purpose; and will perhaps be continued, as opportunities may occur, with apparatus improved in accordance with the indications afforded by the observations already made.

Meridian Circle. — The present Report covers the period from September 24, 1879, to November 1, 1880. During this time observations have been made on 277 days. This number of days is distributed by months as follows: —

	Month.	No. Days Observed.		Month.	No. Days Observed.
1879.	September,	7	1880.	April	27
,,	October	26	,,	May	27
,,	November,	18	,,	June	28
,,	December,	23	,,	July	22
1880.	January	2	,,	August	21
,,	February	0	,,	September	26
,,	March	23	,,	October	27

During the present year, work with the Meridian Circle has been for the most part limited to the continuation of the observations for the determination of the absolute co-ordinates of the selected list of 109 fundamental stars. The only miscellaneous work, has been a series of observations for the determination of the difference of longitude between this Observatory and the Winchester Observatory of Yale College.

The series of observations which was begun February 15, 1879, was completed January 3, 1880.

Before the commencement of the series for the current year, the following instrumental changes were made: —

(*a*) The Standard Clock, Frodsham, No. 1327, was removed from its exposed position in the East Computing Room to the pier formerly occupied by the Howard Clock in the Clock-room of the Time Service.

(*b*) In order to furnish the means of measuring the variation of the instrumental constants during the interval from one culmination of Polaris to the next, Messrs. Alvan Clark & Sons were employed to construct a collimator of long focus. The marble cap-stone of the south collimator pier was removed, and four upright rods were inserted in the brick pier, by which the bed-plate carrying the Y's of the collimator-tube were firmly secured. The object-glass of the new collimator, which has a focus of 206 feet, was set in a frame which was securely fastened to the under side of the bed-plate holding the object-glass of the regular collimator. An opening through the pier and the wall of the building allows the free passage of light.

The experience of 1879 has shown that it is impossible for one observer to carry on the regular system of observations, and at the same time make, in a systematic way, the requisite number of observations for the investigation of the differential refraction by means of a large and miscellaneous list of stars. The observations of this class made during the present year were therefore limited to a few stars observed, as nearly as possible, at successive culminations.

It has been found impracticable to limit the observations to stars which have nearly the same declination as the sun, and at the same time to obtain an equal number of observations at opposite seasons of the year. Hence, during the present year, the entire working-list has been arranged in the order of right ascension. The advantage gained by making the observations differential with respect to the sun will be secured in their reduction.

Inasmuch as the report of the last year closed in September, the tabular statement of the observations for the entire series is included in the series for 1880.

The limiting dates for the different classes of observations are as follows: —

Entire Series I. extends from February 15, 1879, to January 2, 1880.
Entire Series II. extends from February 29, 1880, to November 1, 1880.
Series at Vernal Equinox extends from February 15, 1880, to April 27, 1880.
Series at Autumnal Equinox extends from August 15, 1880, to November 1, 1880.
Series at North Solstice extends from June 6, 1880, to July 6, 1880.
Series at South Solstice extends from December 7, 1880, to January 4, 1880.

	Polaris. No. Obs.			Sun. No. Obs.					Observations for Refraction.			Fundamental Stars.
	U. C.	L. C.	Total.	Vernal Eq.	Autumn Eq.	North Solstice.	South Solstice.	Total.	No. Stars.	No. Obs. U. C.	No. Obs. L. C.	No. Obs.
1879.	102	112	214	85	42	18	10	143	62	232	143	1744
1880.	80	103	183	83	42	24		131	10	131	70	1760

Of the entire number of observations of fundamental stars made during the present year, 1,010 were made previous to August 15; and 750 observations of the same stars were made between August 15 and November 1. At the conclusion of the series in January, these numbers will be nearly equal.

The number of observations between noon and midnight is nearly equal to that between midnight and the following noon.

Reductions. — The chronograph sheets for 1879–80 have been read off to August of the current year. Beyond this but little work has been done towards the reduction of the observations.

Since the completion of Vol. XII. the time of the computing force has been devoted exclusively to the reduction of the zone observations. In order to give a symmetrical character to the entire series of zone observations, it was considered better to make the instrumental constants and clock errors depend directly upon the places of the fundamental stars given in Publication XIV. of the Astronomische Gesellschaft. The labor of recomputation for the years 1871, 1872, 1874 and 1875 has not been very great.

The present state of the zone reductions is as follows: —

(*a*) The means of the right-ascension wires, of the declination wires, and of the circle-readings, have been taken in duplicate for the entire series.

(*b*) The instrumental errors in right-ascension, and the clock errors, have been recomputed from May, 1872, to January, 1879.

(*c*) The declination constants have been recomputed for the same period except for the years 1876 and 1877.

(*d*) Considerable progress has been made with the reduction of the fundamental stars between November 10, 1870, and May, 1872.

The investigation of the variability of the flexure of the telescope has been so far completed that it is safe to say that for the zenith distance 53° the value of the flexure for January of any year is about 0.″6 greater than for July of the same year. This variability was suspected as early as 1876; but it was impossible to determine at that time whether it might not be due either to the refraction constants employed, or to the systematic errors of the provisional system of fundamental stars. Beginning with September, 1878, observations for flexure have been made with the collimators whenever the conditions for its determination have been favorable. The agreement of the values derived in this way with those derived from the new system of fundamental stars seems to indicate that the Pulkowa constants for refraction nearly satisfy observations made under the atmospheric conditions common in this latitude.

Meridian Photometer. — Much progress has been made with the undertaking announced in my last report of measuring the light of all the stars visible to the naked eye between the north pole and —30°. The photometer consists of a transit instrument in which polarized images of the star to be measured and of the pole-star are placed side by side in the field, and brought to equality by turning a Nicol prism inserted in the eye-piece. The instrument is so constructed that the two objects are viewed under precisely the same conditions, with the same magnifying power, the same aperture, the same background, and the same emergent pencil. Moreover, their positions are reversed during each observation. The observer remains in comparative darkness and confines his attention to the settings, all the readings of circles and the recording being done by an assistant. A large number of preliminary measures were made, during which various sources of error were detected. These were finally eliminated, and the first zone was taken on Oct. 25, 1879. Owing to bad weather and other causes, only twenty zones were taken before December. Since then two or three zones of about an hour each have been taken by different observers on almost every clear evening. Before Nov. 1, 1880, 298 zones were taken on 137 nights. The working-list contains about four thousand stars, each of which is to be observed on three different nights by different observers. Four settings are made each night. To determine the atmospheric absorption, a hundred circumpolar stars are observed at their upper and lower culminations. Each of these stars will be observed on about ten or twelve nights. The stars of the first and second magnitude will also be observed on about twelve nights. Except in a few of the early zones, two images of the pole-star are compared at the beginning, middle, and end of each zone, thus eliminating differences in the two objectives and prisms. The number of separate settings is as follows: 30,076 of ordinary stars, 2,996 upper culminations, 3,168 lower culminations, 1,268 of bright stars, and 2,848 of the pole-star. Total, 40,356. Besides these, many measures have been made of the brighter planets, of Vesta, and of the brighter variables and their comparison stars.

More than half of the work is now done, and it is probable that the observations will be completed during next October, unless the weather is very unfavorable. It is possible, however, that additional observations will be made of the brighter stars and of the variables, and the work thus extended through another year. In this case the total number of settings will doubtless exceed one hundred thousand. The average difference in the three measures of the pole-star taken in each zone is somewhat less than 0.08 magnitudes. The probable error in the mean of the three measures of a star is also about 0.08 magnitudes. When the three measures differ so much that the probable error exceeds 0.2, another observation is taken, and this is repeated until the error is reduced to 0.2, or until one of the observations is shown to be erroneous. Although the reduction of a single observation is very simple, yet the great number taken renders the clerical work very laborious, the manuscript already filling about seven reams of letter paper.

Time-Signals. — The distribution of time-signals from the Observatory has been efficiently maintained during the year by Mr. F. Waldo, the assistant in charge of this service. The error of the signals at 10 A.M. has very seldom exceeded one-tenth of a second, as determined by comparison with the standard sidereal clock. The clock-room, built in the cellar of the west wing of the Observatory, continues to give satisfaction. The extreme variation in its temperature during the year was 13.2 degrees Fahrenheit, and the variation from week to week is only about four degrees.

The Observatory and the Waltham Watch Factory are in telegraphic communication; and an arrangement has been made with the Watch Company which permits the use of an excellent clock at the factory for comparison with the clocks of the Observatory. This is chiefly serviceable as an additional security in the observations made with the meridian circle, but it may be of occasional use also in the distribution of time-signals in case of accident or during a long continuance of cloudy weather.

The signals sent from this Observatory are used in New York, in connection with those of the United States Naval Observatory and of the Allegheny Observatory for the regulation of the New York time-service. This Observatory receives no payment for the assistance thus rendered.

The time-ball in Boston has been dropped at noon with great regularity and precision, owing largely to the skill and care, and especially to the experience, of Mr. Purssell of the United States Signal Service, who is in charge of the ball. On 355 days, the ball was dropped exactly at noon, and on four other days at five minutes past noon, according to the rule adopted; on four days it was not dropped, — leaving only three cases of inaccuracy of dropping. From May 1 to Nov. 1, 1880, no failure has occurred; and in only one case has the descent of the ball been postponed five minutes; on one other occasion it was dropped at noon by hand, instead of by telegraph.

The telegraph lines and batteries have continued in charge of Messrs. Stearns and George, whose care and watchfulness have largely contributed to the efficiency of the work.

Publication.—The second part of Volume XI. of the Annals of the Observatory has been completed and distributed during the past year. It contains a discussion of a part of 25,000 photometric observations made with the large equatorial in 1877, 1878, and 1879. This discussion relates chiefly to the fainter objects observed, such as the satellites of planets and minute stars situated near brighter ones. No photometric observations of most of these objects were previously in existence, and these must accordingly have a considerable value, although they cannot be expected to be as accurate as the observations of brighter objects, made with photometers of a different kind, and discussed in Part I. of the same volume. The faint objects should, if possible, be re-observed by some method wholly different from that first employed, and this work will probably be undertaken here at some future time.

Volume XII., which contains the results of observations made in 1874 and 1875 by Professor W. A. Rogers with the Meridian Circle, has also been completed and distributed. This volume includes a discussion of the proper motion of 618 stars, and a comparison of their places as found here and at other observatories. The values of the probable errors show that the work compares favorably with the best done elsewhere. The list of stars is substantially the same as that of Volume X. In that volume the times of transit over the separate wires were given in full; but in Volume XII. only the means have been published; and the expense of publication makes it probable that still further abridgment will be necessary in future volumes of the same class.

The following publications have also been made by officers of the Observatory:—

On the Present State of the Question of Standards of Length. By Wm. A. Rogers. Proc. Amer. Acad., xv. 273.

On Tolles' Interior Illuminator for Opaque Objects. By Wm. A. Rogers. Journ. Roy. Micros. Soc., iii. 754.

Observations of Comet *c*, 1879 (Swift), made with the 15-inch Equatorial of the Harvard College Observatory. O. C. Wendell.

Astron. Nach., xcvi. 21, No. 2282. Observations on sixteen nights.

Observations of the Satellites of Mars made at the Harvard College Observatory. Edward C. Pickering and O. C. Wendell. Astron. Nach., xcvii. 115, 145. Nos. 2312, 2314. Contains the results of 1,348 observations.

Dimensions of the Fixed Stars with Especial Reference to Binaries and Variables of the Algol Type. Edward C. Pickering. Proc. Amer. Acad., xvi. 1. pp. 37. Contains a discussion of the conclusions that might be derived if all stars had equal intrinsic brightness; also determines the orbit which a dark satellite must have to produce the observed variations in light of *β Persei.*

New Planetary Nebulæ. Edward C. Pickering. Amer. Journ. of Science, xx. 303.

The following papers were read by Professor Rogers before the American Association, and will appear in their forthcoming volume of Proceedings: —

On the Progress made at the Observatory of Harvard College in the Determination of the Absolute Co-ordinates of 109 Fundamental Stars.

On a Simple and Expeditious Method of Investigating all the Division Errors of a Meridian Circle.

On the Systematic Errors of the Greenwich Right Ascensions of Southern Stars observed between 1816 and 1831.

On a Preliminary Determination of the Equation between the British Imperial Standard Yard and the Metre of the Archives.

Besides some shorter notices, the following reviews of the Annals have been published: Vol. IX., by Mr. Th. Wolff, in Vierteljahr. der Astron. Gesell., xv. 193; Vol. XI., Part I., by Mr. E. Lindemann, Vierteljahr. der Astron. Gesell., xv. 208. Vol. XI. has also been reviewed in Nature, xxi. 23; Observatory, iii. 387, 515; and the Astronomical Register, xvii. 290, xviii. 110.

A circular inquiring to what extent the series of Annals of this Observatory was complete as far as Volume XI. inclusive, was prepared last winter, and over two hundred copies of it were sent in February to the institutions and to some of the astronomers among whom our publications are distributed. At the time of the distribution of Volume XII., in July, the deficiencies reported in answer to the circular were supplied so far as the stock of the older volumes would permit; and a second copy of the circular was sent to each library from which no reply to the first copy had been received. From the reports which have thus far been made it appears that fifty-nine sets of the Annals were already complete; and this number has been increased to eighty-nine by the recent distribution. Forty-six sets were also partially completed, and notice sent of the scarcity of the volumes not supplied. From thirty-five institutions no reply to the circular has as yet been received. The volumes for which the demand relatively to the stock on hand is greatest are: II. Part I. (observations of Saturn), III. (Comet of 1858), and V. (Nebula in Orion). These can be supplied only in exceptional cases. Any duplicate copies will be thankfully received, and will be used in completing broken sets. The following statement shows that few copies remain of some other early volumes, duplicates of which would also be welcome: —

Vol. I. Part I. 242, Part II. 98; Vol. II. Part I. 39, Part II. 45; Vol. III. 43; Vol. IV. Part I. 22, Part II. 157; Vol. V. 39; Vol. VI. 191; Vol. VII. 124; Vol. VIII. 30; Vol. IX. 300; Vol. X. 115; Vol. XI. Part I. 189, Part II. 206; Vol. XII. 180.

A new edition of Vol. VIII. was published by Messrs. Ginn & Heath; but a large portion of it was destroyed by fire some months ago, and the remainder was purchased by the Observatory in order to complete sets.

A re-examination has been made of the equatorial observations taken in 1866–76. A second reduction of the measurements of double stars is now nearly complete. The observations of nebulæ and of occultations are also nearly ready for the press. The observations of asteroids and comets have in most cases lost their value; but, as they may be much needed in special cases, it is proposed to publish an index to them, so that any which are wanted can be furnished on application to this Observatory.

A beginning has been made in the reduction of the meteorological observations from 1840 to 1880. Owing to their great bulk, it is probable that only the monthly means will be published. These, with the Meridian Circle observations, the recent photometric observations of the large telescope, the work with the Meridian Photometer, and the observations of Jupiter's satellites, will fill at least six volumes, which are in a more or less advanced state of preparation for publication.

Library. — Notwithstanding the additional shelves placed in the Library, more room is now much needed, and it will probably be necessary soon to devote the room opposite to library purposes. Some binding has been done, especially in collecting the pamphlets, but much more is required. One or two hundred volumes could be bound to advantage. The press of other work has also prevented cataloguing the later additions to the Library, and marking the books so as to define their precise location. The Library, however, is not yet so large as to render this omission a serious inconvenience.

Buildings, Grounds, &c. — Various improvements have been made in the west wing of the Observatory. The wooden pier of the west Equatorial had become somewhat unsteady; it obstructed and darkened the entry through the building, and was a source of much danger in case of fire. The entry was accordingly carried through it, over a structure of brick in the basement, where a pier suitable for a clock has been placed. Additional storage room for volumes of the Annals was attained by this alteration. Hard-pine floors were laid in the entries and in the Library. The entries were painted and the upper story repapered. A handsome carpet has also been purchased for the Computing Room in the east wing.

The lower end of the sunken road, formerly opening on Concord Avenue, has been filled up, and the appearance of this part of the grounds has been greatly improved. Another important improvement has been made by regrading and sowing with grass-seed the portion of the grounds near Madison Street.

Last spring an unusually favorable opportunity offered itself to Professor Rogers to procure copies of the standard yard and metre, and to determine the relation between them. He accordingly made a brief visit to France and England for this purpose, and collected the material for what promises to be a valuable contribution to this subject.

It is my painful duty to announce the death of Mr. Joseph F. McCormack, who aided in the work of the Observatory from 1872 to 1880. He was a faithful and conscientious assistant, and attained great skill in his special work, that of reading the microscopes of the Meridian Circle. He died of typhoid fever on Feb. 2, 1880, at the age of twenty-five years and six months.

The principal want of the Observatory at the present time is means for the publication of its Annals. The large number of volumes (Vols. IV. Part II., VIII., IX., X., XI. Parts I. and II., and XII.) issued during the past five years has exhausted the accumulated interest of the Sturgis Fund; only one more volume can be paid for at present from the Quincy Fund; and no other funds are especially intended to defray the expenses of publication. A part of the annual subscriptions might be used for printing; but this seems unadvisable while the whole can be so usefully and economically employed in providing additional assistance for carrying on and reducing the work of the Equatorial and other instruments.

The cost of each volume will be about two thousand dollars, or where the two parts are published separately, about a thousand dollars for each part. Some volumes, especially the results of the zone observations and of the Meridian Photometer, are likely to be standard works of reference for many years. It is hoped that persons may be found willing to further the cause of astronomical science by contributing to this object.

EDWARD C. PICKERING, *Director.*

To the President and Fellows of Harvard College: —

It is now twenty years since the foundation of the Museum. During that time the Museum building has more than trebled in size, and its collections are unsurpassed in some departments. Thanks to the active co-operation of the assistants, the large collections have been kept in excellent order, and rapid progress has been made in the arrangement of the rooms intended for public exhibition. With the present additions to the building it will become possible to complete the exhibition-rooms containing the Zoölogical collection, and to begin in the course of two or three years the arrangement of the Palæontological exhibition-rooms.

Although I gave the plans proposed for the completion of the northern wing of the Museum, and of the northwestern corner-piece in 1875, yet these have from various causes undergone very important modifications, so that at the risk of some repetitions I here give the final plans as they have been adopted, and from which the wing building has been completed, and the northwestern corner-piece begun during the past year.

The changes in the plans are mainly due to the incorporation of the building of the Peabody Museum with the building originally planned for the Museum, and to the modifications involved in the limitations laid upon the space to be devoted to exhibitions. The explanations of the plans will show the general distribution of the available space which leaves full freedom for the development of any branch of the Museum by its simple removal to a new section of the building as soon as it has outgrown the limits assigned to it here.

In the north wing, which is now completed, the basement will be devoted to the storage of the alcoholic collections, intended for specialists, and to suitable workrooms for the assistants. The first story will contain the Synoptic room, the Palæontological exhibition-rooms, and the storage-rooms for Palæontology and Geology. The gallery floor of the first story will contain the workrooms for the assistants and specialists in Geology and Palæontology, as well as the rooms devoted for the present to Comparative Anatomy. The second story and its gallery is entirely devoted to exhibition-rooms, containing the Systematic and Faunal collections; while the mansard story contains the Entomological Department with its workrooms, the Conchological Department, and the storage and workrooms devoted to Birds, to Mammals, to Radiates, and to Articulates, into which specialists will be admitted under the supervision of the Museum assistants.

In the northwestern corner-piece there will be only three exhibition-rooms, one Faunal room devoted to Europe, and two large rooms intended for the Atlantic and Pacific Oceans. Three large laboratories adjoining the palæontological and geological workrooms of the assistants, will be devoted to undergraduates and students in Geology and Palæontology.

Three similar laboratories will be devoted to Biology, the materials for study to be drawn either from the alcoholic and other stores of the Museum, or from the vivarium and aquarium which are to occupy the greater part of the basement of the corner-piece. In the former we shall hope to keep an ample supply of all the common types necessary for dissection and for embryological study, such as frogs, salamanders, guinea-pigs, fowls, rabbits, etc., while it is proposed to keep the large aquarium well stocked with the principal fresh-water and marine animals. The proximity of Cambridge to the sea will make it a comparatively easy task to supply the aquarium not only with the marine animals common on the north of Cape Cod, but also those of its southern shores. I anticipate no difficulty in keeping a supply of marine animals not only for demonstration, but also for original work, hoping thus to do away with much of the desultory work unavoidable for those who pass their summers on the seashore. I do not, of course, propose to replace observation in the field to the original investigator by this means, but I do hope, by bringing the larger number of our marine animals within the reach of the students during their winter course of instruction, together with books, apparatus, etc., then in use, to simplify work both for pupil and teacher, and to lessen the strain which the summer schools bring upon our already overburdened instructors.

The Aquarium room is large enough not only to supply this need, but also to give excellent facilities for following out any special line of investigation in the Anatomy or Embryology of our marine animals, under the very best circumstances.

To facilitate the working of the establishment, a small gas engine will supply the necessary power for the elevators and the pumping of the water for the aquarium.

The gallery floor of the first story will contain the Curator's room, and the Library rooms, which will have in addition to the reading-room a shelving capacity of 50,000 volumes, exclusive of the special libraries in the rooms of the assistants. In the mansard there will be a couple of rooms intended for the artist of the Museum, or for special investigations, and a large lecture-room, with a seating capacity for 325 persons.

The want of proper accommodations for the instruction of undergraduates and other classes in the Museum is becoming a very serious matter, but it is hoped that the needed room in the addition to the new building will become available before the evil becomes intolerable.

Instruction has been given at the Museum by Professors Whitney, Shaler, Farlow, Dr. James, and by Messrs. Faxon, Mark, Davis, and Wadsworth. For the details of the courses I would refer to the special reports of Professors Whitney and Shaler, and to the detailed report on the Biological courses prepared by Dr. Farlow and Mr. Faxon.

The collections of the second Blake Expedition to the Caribbean Islands have been sent for final revision to Messrs. Milne-Edwards and Perrier of Paris, to Dr. Steindachner, Professor O. Schmidt, Dr. Ehlers, Professor Carus, Sir Wyville Thomson, and Messrs. Brady. The collections of bottom samples have been sent to Mr. John Murray of Edinburgh for examination.

Materials have also been supplied from our collections for study to Professor Schwalbe of Jena. A selected collection of Echini was sent to Dr. H. Ludwig to assist him in preparing a new edition of the Echinoderms of Bronn's Thierreich. A collection of Trichoptera has been sent to Mr. R. M'Lachlan of London, one of Staphylinidæ to Mr. Fauvel, and one of Brenthidæ to Mr. Power for identification and publication with other material.

The second and concluding Part of the Final Report on the Sponges of the "Blake" by Professor Oscar Schmidt of Strasburg has been published. It forms a quarto Memoir of sixty pages, handsomely illustrated by five Plates.

Dr. Steindachner has continued his descriptions of Fishes from South America, based in great part on the Collections of the Museum, in the Proceedings of the Vienna Academy.

The collection of the Echini of the "Challenger" Expedition, entrusted to me for description, has been returned to England this spring, and I have forwarded the final Report to Sir Wyville Thomson, together with the complete edition of sixty-five Plates illustrating this Memoir.

The Museum publications have been more than usually important and numerous.

The Bulletins contain contributions to the Natural History of the depths of the sea, by Messrs. Pourtalès, Lyman, Dall, and myself. In addition there have been published papers by Messrs. Faxon, Fewkes, Allen, and Wadsworth on Crustacea, Siphonophoræ, Bats, and Lithology.

The Report on the Florida Reefs, prepared by Professor Louis Agassiz for the Superintendent of the Coast Survey, has been published as one of the Museum Memoirs. It is finely illustrated by lithographic plates, drawn many years ago by the late A. Sonrel.

In connection with Professor Whitney the Museum has also completed the Auriferous Gravels of California, completing Vol.

VI. of the Memoirs, fully illustrated with plates, maps, and heliographs of scenery.

No. 2 of Vol. VII. of the Memoirs, "Climatic Changes of Later Geological Times," also published in connection with Professor Whitney, is well advanced.

The increase of the Library has been large, and our exchanges continue on a satisfactory footing. The total number of volumes now in the Library exclusive of pamphlets is over 14,000. Nearly 800 volumes were added during the past year, and about 1300 pamphlets and parts of volumes.

The special Reports of the assistants give the details of the departments in their charge. The work on the collection of Worms, in charge of Dr. Mark, has been limited to the necessary care of the specimens and to short studies of some of the parasitic worms added to the collections during the past year. As soon as the collections of Annelids sent for identification to Europe have been returned a more detailed report of the collection can be made.

The most important additions during the past year have been the collection of Palæozoic Fossils purchased from Messrs. Dyer, Walcott, and Gebhard. The Dyer collection filled no less than 200 boxes besides a few large slabs. It has been brought together by Mr. Dyer during the past twenty years, and is an unrivalled collection of Invertebrates mainly from the Cincinnati group.

The Walcott collection represents mainly the Trenton limestone, and is specially rich in Trilobites. The material upon which Mr. C. D. Walcott based his important investigations on the structure of Trilobites forms a part of this collection.

The Gebhard collection is an important one in the palæontological history of the State of New York. It is the result of the work of three generations, Mr. Gebhard, from whom the collection was purchased, having materially increased it as he received it from his grandfather through his uncle, both of whom were zealous collectors of the fossils in the vicinity of Schoharie.

A beginning has also been made to supply our deficiencies of North American Vertebrate Fossils. Mr. Garman spent some time at the west, and brought back an excellent collection of Tertiary Vertebrates, mainly from the Bad-lands.

To supply our desiderata towards the Faunal collections now preparing of South America, India, and Africa, we have received by purchase a large number of Birds and Mammals, both skins and skeletons.

The arrangement of the North American Faunal room is practically completed, and I hope during the coming year to open the South American Faunal room to the public. The cases for the systematic collection of Molluscs have been completed, and Mr. Hamlin is now arranging the room for exhibition.

All the old exhibition-rooms have now been thoroughly repaired, and the appearance of the rooms open to the public has been greatly improved.

We have received from Mrs. T. M. Brewer the collection of birds' eggs which the late Dr. Brewer bequeathed to the Museum. During the past five or six years Dr. Brewer constantly added to his already large collection, and thanks to his interest in our Oölogical collection it is second only, for American Birds, to that of the Smithsonian Institution.

The collection of deep-sea Invertebrates from the Western Caribbean made by Commander J. R. Bartlett of the United States Coast Survey, Steamer "Blake," while running lines of soundings during the winter of 1879–80 is an important addition to the collections made by the "Blake" in the Gulf of Mexico and from the Windward Islands. The Fauna of that part of the Caribbean does not differ from that of the Eastern portion. During the last part of June and during July Mr. Patterson, the Superintendent of the Coast Survey, placed the "Blake" again at my disposal to run lines of dredgings normal to the East Coast of the United States. The expedition was entirely successful; large and interesting collections were made during the cruise, which extended from the Northeastern edge of George's Shoal to a line east of Charleston, S. C., directly across the Gulf Stream. I have given an account of this expedition in Letter No. 4, addressed to the Hon. Carlile P. Patterson, Superintendent United States Coast and Geodetic Survey. The number of stations occupied during this cruise is unusually large, thanks to good weather and the untiring zeal of Commander Bartlett and Mr. Sharrer, the executive officer, as well as all the officers and crew of the "Blake," to whom deep-sea dredging has now become a second nature. As the northern ground covered by this expedition is the extension into deep water of the area examined by the United States Fish Commissioners, a part of the Collections has been entrusted to Professors Verrill (Cephalopods) and Smith (Crustacea). The osseous fishes have been placed in the hands of Mr. Goode for identification.

The Museum has suffered a heavy loss in the death of Mr. Pourtalès. From his early youth, first as student and afterward as colleague and scientific adviser, he had held the most intimate relations with Professor Agassiz, and had been familiar with every step in the history of the Institution founded by him. In the laboratory, in the field, on their long voyages they had worked together to one end, and long before he was officially connected with the Museum he had not only contributed largely to its collections but was identified with its general progress. Since his appointment after my father's death as Keeper of the Museum, he has not only taken charge of his own department, but on him has devolved, during my frequent and prolonged absences, the management of the Museum and the execution of plans requiring for their success entire sympathy with the spirit in which they were conceived. I can never replace the friend who has thus, for nearly ten years, been my other self in the administration of the Museum, and the Institution would indeed be fortunate should it find in his successor the learning, the modesty, the industry, or the executive ability which, combined with his rare scientific attainments, made him invaluable in his post at Cambridge.

This is not the place to enter into any details regarding his scientific career. I may, however, recall the great influence his investigations have had upon Marine Zoölogy. Following Bailey in his microscopic investigations upon the nature of the sea-bottom on the East Coast of the United States, he extended like researches little by little, until under the enlightened support of the then Superintendent of the Coast Survey, Professor Bache, he became through his extensive dredging operations in the deep waters of the Straits of Florida (1866, 1867, 1868) the pioneer of deep-sea zoölogical explorations in America. His publications on this subject are to be found mainly in the Reports of the United States Coast Survey, in Silliman's Journal and in the Memoirs and Bulletins of the Museum of Comparative Zoölogy. The former were published while he was still an assistant in the Coast Survey. His later publications, under the auspices of the Museum, were chiefly devoted to the deep-sea corals, crinoids and polyps of the "Bibb," "Hassler" and "Blake" expeditions after he became attached to the Museum. They bear witness not only to the range of his learning but to the breadth of view which he brought to all his investigations.

ALEXANDER AGASSIZ, *Curator*.

CAMBRIDGE, September 1, 1880.

APPENDIX.

I.

RESIDENCES OF STUDENTS, 1880–81.

STATES.	College.	Medical School.	Law School.	Divinity School.	Lawrence Scientific School.	Dental School.	Bussey Institution.	Graduate Students.	Unmatriculated Students.	The University.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Massachusetts	509	176	77	9	20	17	5	17	6	836
Per Cent from Mass.	**61.5**	**73.**	**49.3**	**39.**	**54.**	**95.**	**82.**	**51.**	**40.**	**61.5**
New Hampshire	20	15	6	....	2	....	....	1	....	44
Vermont	9	3	2	....	....	....	....	....	1	15
Maine	23	9	7	....	....	....	....	4	....	43
Rhode Island	10	9	1	1	1	....	....	....	....	22
Connecticut	4	9	3	....	....	....	....	1	1	18
New England	575	221	96	10	23	7	5	23	8	978
Per Cent from New Eng.	**69.5**	**91.7**	**61.5**	**43.**	**62.**	**95.**	**83.**	**70.**	**53.**	**72.1**
New York	104	4	11	3	8	....	1	4	....	136
New Jersey	5	....	2	....	2	....	....	....	....	9
Pennsylvania	28	1	3	....	....	....	....	....	....	32
Delaware	....	....	1	....	....	....	....	....	1	2
Middle States	137	5	17	3	10	....	1	4	1	178
Per Cent from M. States	**16.5**	**2.**	**10.9**	**13.**	**27.**	....	**17.**	**12.**	**7.**	**13.**
Maryland	5	....	2	....	....	....	....	....	....	7
Virginia	....	....	1	....	....	....	....	....	....	1
West Virginia	1	1	....	....	1	....	....	....	....	3
North Carolina	1	....	1	....	....	....	....	....	....	2
South Carolina	3	....	....	....	....	....	....	....	....	3
District of Columbia	10	2	2	....	....	....	....	....	....	14
Georgia	....	....	2	....	....	....	....	....	....	2
Alabama	1	....	....	....	....	....	....	....	....	1
Florida	2	1	....	....	....	....	....	....	....	3
Texas	....	....	1	....	....	....	....	....	....	1
Arkansas	....	....	1	....	....	....	....	....	....	1
Tennessee	....	....	1	....	....	....	....	....	....	1
Kentucky	5	1	1	....	....	....	....	....	....	7
Southern States	28	5	12	....	1	....	....	....	....	46
Per Cent from S. States	**3.3**	**2.**	**7.7**	....	**3.**	....	....	....	....	**3.4**
Ohio	22	1	11	2	1	....	....	2	2	41
Indiana	5	...	1	....	....	....	....	....	....	6
Illinois	20	....	5	2	1	....	....	....	....	28
Wisconsin	5	1	1	....	....	....	....	....	....	7
Michigan	....	1	1	1	....	....	....	1	....	4
Minnesota	4	....	....	....	....	....	....	....	....	4
Iowa	3	....	....	1	....	....	....	....	....	4
Missouri	3	....	2	1	....	....	....	1	....	7
Kansas	2	1	....	....	....	....	....	....	....	3
Nebraska	....	....	....	....	....	....	....	1	....	1
Colorado	....	....	....	....	....	....	....	....	1	1
Idaho	....	1	....	....	....	....	....	....	....	1
Utah	1	....	....	....	....	....	....	....	....	1
California	17	1	4	....	....	....	....	....	....	22
Western States	82	6	25	7	2	....	....	5	3	130
Per Cent from W. States	**10.**	**2.6**	**16.**	**31.**	**5.**	....	....	**15.**	**20.**	**9.6**
British Provinces	2	1	5	1	1	....	....	1	....	11
Other Places	4	3	1	2	....	1	....	....	3	14
Per Cent	**0.7**	**1.8**	**4.**	**13.**	**3.**	**5.**	....	**3.**	**20.**	**1.8**
Total Numbers	828	241	156	23	37	18	6	33	15	1364

II.

RETIRING ALLOWANCES FOR UNIVERSITY OFFICERS.

At a meeting of the President and Fellows held Nov. 29, 1880, the following action was taken: —

Whereas, the President and Fellows, having been informed that certain friends of the University are disposed to give money for the purpose of ultimately establishing a system of pensions or retiring allowances for University officers, desire to open the way for such gifts: —

Voted, that the Treasurer open upon his books a permanent account with the title "Retiring Allowance Fund," to which account all gifts for pensions or retiring allowances shall be carried, there to accumulate until the fund shall have become, in the judgment of the President and Fellows, adequate to the support of a suitable system.

Voted, that the following rules for the administration of a system of retiring allowances be entered upon the record for the purpose of exemplifying what the present Corporation, after careful consultation with the present professors and assistant professors, regard as a suitable system.

1. Any person in the service of the University and sixty years of age, who has held an office of the grade of an assistant-professorship, or of a higher grade, for twenty years, shall be entitled to a retiring allowance of $\frac{20}{60}$ of his last annual salary in activity, and to an additional allowance of $\frac{1}{60}$ of his last annual salary for each year of service in addition to twenty; but no retiring allowance shall exceed $\frac{40}{60}$ of the last annual salary in full activity.

2. No person under sixty years of age shall be entitled to a retiring allowance; but the President and Fellows may at their discretion pay to any person, who, while in the service of the University, has become incapable of discharging his duties by reason of permanent infirmity of mind or body before the age of sixty, whatever allowance, if any, he would be entitled to receive under Rule 1, were he sixty years of age.

3. In computing the retiring allowance of a person who entered the service of the University, as a professor or at an equal grade, at an unusually advanced age, the President and Fellows may at their discretion add a number of years, not exceeding ten, to his actual years of service; and such a person may be granted a retiring allowance after ten years of service instead of twenty.

4. Any professor or officer of like grade entitled to a retiring allowance, who with the consent of the President and Fellows shall give up a part of his work and the corresponding part of his salary, shall have a right, upon this partial retirement, to a retiring allowance computed under Rule 1, upon that part of his full salary which he relinquishes; and upon his complete retirement his allowance shall be computed on his last full annual salary, and his years of partial retirement shall count as years of service.

5. The President and Fellows may, in the exercise of their discretion, retire wholly or in part any professor or officer of like grade, who has reached the age of sixty-six, upon the retiring allowance to which he is entitled.

6. The President and Fellows retain power to alter these rules, without, however, abridging the rights which individuals in the service of the University shall have acquired under them.

7. The obligation of the President and Fellows to pay retiring allowances would be neither greater nor less than their obligations to pay salaries, so that, if misfortune should compel a percentage reduction of salaries, retiring allowances would be reduced in the same proportion.

III.

Table of Schools and Colleges from which young men actually entered Harvard College from 1871 *to* 1880 *inclusive, with the number that entered from each institution in each year.*

	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.
Academy of Prot. Episc. Ch. Phila.	..	..	..	..	..	..	..	..	1	
Acadia College, Wolfville, Nova Scotia	..	..	1	2	1	1	2	..	2	
Adams Academy, Quincy	..	..	1	5	13	11	9	22	13	13
Adelphi Academy, Brooklyn, N. Y.	..	..	..	..	..	..	..	2		
Albany, N. Y., Boys' Academy	..	..	..	1	..	1	..	1		
Allegheny College, Pa.	..	..	2	..	1					
Amherst College	..	..	..	..	..	1	1			
Anthon Grammar School, New York	..	..	..	..	1					
Antioch College, Ohio	1	..	..	..	..	..	..	..	..	1
Appleton Acad., New Ipswich, N.H.	..	..	..	..	..	..	..	1		
Ashland High School	..	..	..	..	..	1				
Baldwin University, Berea, Ohio	..	..	..	..	1	1	2		1	
Baltimore City College	..	..	..	2						
Bangor, Me., High School	..	..	..	..	1	..	..	..	1	
Bangor, Me., Theological Seminary	..	..	..	..	..	..	..	..	..	1
Bath, Me., High School	..	..	..	..	..	..	..	1		
Bellevue, Va., High School	..	1	1							
Bethany College, W. Va.	..	..	..	..	2					
Beverly High School	..	1								
Bishop's College School, Lennoxville, Canada	..	..	..	1						
Boston Latin School	18	13	18	12	27	10	21	13	13	23
Boston University	..	..	..	..	..	..	1	1		
Bowdoin College, Me.	2	..	..	1						
Brookline High School	8	2	2	..	1	8	2	5	5	1
Brooks, Wm. H., pr. sch., Boston	..	..	..	..	1					
Brooks Academy, Cleveland, Ohio	..	..	..	..	..	..	1	2	1	1
Brown University, R. I.	..	1								
Buffalo, N. Y., Classical School	..	..	..	..	..	1				
Butler University, Indianapolis, Ind.	..	..	..	..	..	..	..	..	1	
Calais, Me., High School	..	..	..	..	..	..	..	1		
Cambridge High School	7	7	11	10	8	10	18	15	10	7
Canfield, C. T., priv. sch., South Boston	..	..	..	1						
Castine, Me., High School	..	..	..	..	..	..	..	..	1	
Chadwick & Forbes, Boys' Prep. Sch., Brooklyn, N. Y.	..	..	..	..	..	..	..	..	2	
Charlestown High School	..	3	2	4						
Charlier Institute, New York	..	..	..	..	..	..	1			
Chase, R. H., priv. sch., Phila.	1	1	1	1	3					
Chauncy Hall School, Boston	..	3	4	..	1	1	8	1	5	1
Chelsea High School	1	..	..	..	1	2	..	1	1	
Chicago, Ill., High School	1	..	..	1	3	1				
Choules Institute, Newport, R. I.	4	..	..	2	.					
Cleveland, O., Central High School	1	..	..	..	..	..	..	1		

	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.
Cleveland, O., West High School..	..	..	..	..	..	1	2	8		
College of City of New York	..	..	..	..	..	..	..	3	2	
College of New Jersey, Princeton..	..	..	..	2	..	1	..	..	1	1
Collegiate and Polytech. Institute, Brooklyn, N. Y................	..	..	..	1	1	2	2	..	..	1
Collegiate Institute, Newton, N. J.	..	..	..	..	1					
Columbia College, N. Y...........	1	..	..	1						
Columbian College, D. C..........	..	..	..	..	..	..	..	1		
Concord High School	..	2	..	..	..	..	..	1	1	2
Concord, N. H., High School......	1									
Cornell University, N.Y...........	..	..	..	..	..	..	..	1	..	1
Corning, N. Y., Free Academy....	..	..	..	..	..	..	..	..	1	
Cotting High School, Arlington...	..	..	2	1	1	..	2			
Dartmouth College, N. H.	1									
Dean Academy, Franklin..........	..	..	..	1						
Dedham High School	..	1	..	..	..	1				
Delaware College, Newark.........	..	..	..	..	..	..	..	..	1	
Del. Lit. Inst., Franklin, N. Y.	..	..	..	..	..	1				
Detroit, Mich., Classical School ...	..	..	1							
De Veaux College, N. Y..........	..	..	..	..	1	2	..	1	1	8
Dixwell, E. S., priv. sch., Boston..	[illegible]	5								
Dorchester High School	1	1	1	..	..	1	1			
Dummer Academy, Byfield.......	..	1								
Eaglenest, Newburyport..........	..	..	1	..	..	..	..	2		
Eayrs, Wm. N., priv. sch., Boston .	2	..	4	2	8	2	2	2	4	
Edgartown High School..........	..	..	..	..	..	..	..	1		
Edinburgh University, Scotland...	..	..	1							
Edward Little High School, Auburn, Maine	..	..	..	..	..	..	..	..	1	
Eliot High School, Jamaica Plain..	..	1								
Emerson Inst., Washington, D. C.	..	2	1	..	1	..	..	..	2	1
Englewood, Ill., High School......	..	..	..	1	..	..	..	..	2	
Erie. Pa., Central High School....	..	1	..	..	..	..	..	..	..	1
Everson, D. S., School for Boys, New York	..	..	1	1	2	2	..	..	1	1
Fairview Institute, Saratoga Springs, N. Y.................	..	..	..	..	..	..	..	..	1	1
Fall River High School	..	..	..	..	..	..	1	1		
Fitchburg High School...........	..	..	5	1	5	..	..	..	..	2
Fort Edward Institute, N. Y.......	1									
Fort Wayne, Ind., Central Gram. Sch.	..	..	..	..	..	..	..	..	1	
Framingham High School	..	..	..	..	..	..	..	1		
Friends' Academy, New Bedford..	3	..	2	1	5	1	8	2	6	
Gardner High School.............	..	..	..	..	..	..	1			
Gibbens & Beach, priv. sch., New York	1	..	..	..	..	..	1	..	..	1
Glen's Falls Academy, N. Y.......	..	..	..	..	..	1				
Gloucester High School	1	..	..	..	..	..	..	2		
Goddard Seminary, Barre, Vt.	..	..	..	..	..	..	..	..	1	
Goff, C. B., Class. Sc., Providence, R.I.	..	..	..	..	..	..	..	..	..	1
Grafton High School............	1									
Hackensack, N. J., Academy......	..	..	..	..	1					
Hamilton College, N. Y.	..	..	..	..	..	3				
Harrow, England	..	..	..	..	..	..	..	..	..	1
Harvard Divinity Sch., Cambridge	..	..	..	..	..	..	..	..	..	1
Harvard School, New York.......	..	2	1							
Harvard School, Springfield	..	..	1							
Hasbrouck's Class. and Comm. Inst., Jersey City, N. J...............	..	..	1	1						
Haverford College, Pa............	..	..	..	2	..	4	..	3		

	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.
Haverhill High School	3	..	3	1	..	4	1	2	1	1
Hobart College, N. Y.	1	..	..	..	..	..	1			
Holliston High School	..	..	..	..	1					
Holyoke High School	..	..	..	..	..	..	..	..	..	1
Hopkins Grammar School, New Haven, Conn.	..	..	..	..	..	..	1	1		
Hopkinson, J. P., priv. sch., Boston	8	1	11	6	7	10	10	7	9	11
Hopkinton High School	..	..	..	..	..	..	..	1		
Hughes High School, Cincinnati, O.	..	..	..	..	..	..	..	1	1	1
Illinois Normal High School	..	..	..	1	1					
Indianapolis, Ind., Classical School	..	..	..	..	..	..	..	..	1	
Iowa State University	..	..	..	..	1					
Keene, N. H., High School	..	..	..	..	..	..	..	..	..	2
Kendall, J., priv. sch., Cambridge	5	3	1	3	2	5	3	6	2	
Kentucky University	..	..	..	..	..	..	1	..	..	2
Kimball Union Academy, Meriden, N. H.	..	..	1							
Kingston High School	..	..	..	..	1					
Lake View, Ill., High School	..	..	..	..	..	..	..	..	..	1
Lawrence Academy, Groton	..	..	..	..	..	..	..	..	..	1
Lawrence High School	..	..	..	..	1	2	2	2	2	1
Lawrence Scientific School	..	..	1							
Leavenworth, Kan., High School	1	..	2	2						
Leominster High School	..	..	4	1						
Lexington High School	..	..	..	..	..	..	..	..	1	
Lockport, N. Y., High School	..	..	..	..	..	..	..	..	1	
Louisville, Ky., High School	..	..	..	..	1					
Lowell High School	4	..	1*	..	2	1	1	2	1	1
Lynn High School	..	8	..	1	2	..	1	..	..	1
Madison, N. J., Classical Institute	..	..	..	..	..	1				
Madison University, Wis.	..	..	..	..	..	..	..	..	1	
Maine Wesleyan Seminary, Kent's Hill, Me.	..	..	..	..	1					
Malden High School	..	..	..	..	4	1	2	1	1	
Manchester, N. H, High School	..	..	..	..	..	..	..	1		
Marlboro High School	..	..	..	..	..	..	..	1		
Medford High School	..	2	2	2	..	1	..	1	..	1
Melrose High School	..	2	2	..	..	..	..	..	2	
Milford High School	1	..	1							
Milwaukee, Wis., Academy	..	..	..	..	1	1				
Milwaukee, Wis., High School	..	..	..	..	..	..	..	..	..	1
Mohegan Lake Sch., Peekskill, N. Y.	..	..	..	..	2					
Montclair, N. J., High School	..	..	..	..	..	..	..	..	1	
Morse, J. H., priv. sch., New York	..	..	..	1	..	1	..	1	2	
New Bedford High School	..	..	..	..	..	..	1	..	..	1
New Britain, Conn., High School	..	1								
Newburyport High School	..	..	1							
New Church School, Waltham	..	..	1	4	1	..	..	2		
New London, Conn., Lit. and Scient. Institute	1									
Newton High School	5	1	5	5	3	5	7	6	3	9
Newton Theological Institution	..	..	..	..	1					
Nichols Academy, Dudley	..	..	..	..	1					
Noble, G. W. C., priv. sch., Boston.	8	10	6	5	8	10	9	7	9	15
Northampton High School	..	..	..	..	..	..	..	1		
North Side School, Chicago, Ill.	..	..	1							
Northwestern University, Ill.	..	.	..	1	1					
Norwood, Va., High School	1									
Oberlin College	..	..	..	..	..	..	..	..	..	1
Ohio Agric. & Mechan. College	..	..	..	..	..	..	1			

	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.
Ohio Wesleyan University.........	..	..	..	..	1	1				
Oswego, N. Y., High School.......	1									
Phillips Academy, Andover.......	3	14	13	9	1	5	8	4	4	4
Phillips Academy, Exeter, N. H....	25	32	40	25	26	34	18	20	24	25
Portland, Me., High School	3	..	..	2	1	..	..	..	1	
Pottsville, Pa., High School	..	..	1							
Providence Conf. Sem., East Greenwich, R. I.	..	1								
Providence, R. I., High School	1									
Racine College, Wis..............	..	..	..	..	1					
Rittenhouse Acad., Washington...	1									
Riverview Acad., Po'keepsie, N. Y.	..	..	..	1						
Rix's Colleg. School, Cincinnati, O.	1	..	..	..	..	..	..	..	..	2
Rogers High School, Newport, R. I.	..	..	..	..	..	..	2	2		
Roxbury Latin School............	6	9	3	6	11	6	8	10	14	8
Rugby Academy, Philadelphia....	..	..	..	..	..	..	..	..	1	
Sachs' Collegiate Inst., New York .	..	..	..	1	..	..	..	..	2	2
St. Augustine's Sch., Portland, Me.	..	2								
St. John's School, Sing Sing, N. Y.	3	..	2	..	..	1	1			
St. Joseph, Mo., High School	..	..	..	..	1					
St. Lawrence University, N. Y.....	..	..	..	..	..	..	1	..	..	2
St. Mark's School, Southboro'.....	1	2	..	3	1	2	8	1	2	1
St. Paul's School, Concord, N. H...	2	1	2	..	11	3	2	5	3	6
Salem High School	4	2	1	2	4	2	4	2	6	4
San Francisco Boys' High School..	..	..	..	..	..	..	4	..	2	2
Smyrna, Del., Seminary	..	1								
Somerville High School	2	2	4	1	2	3	7	8	6	2
South Berkshire Institute, New Marlboro'	..	..	..	..	..	..	..	..	..	1
Springfield Collegiate Institute....	..	..	..	..	..	..	..	..	1	
Springfield High School	3	1	1	..	2	..	2			
State University, Columbia, Mo...	..	..	..	..	..	..	..	1		
Swarthmore College, Pa..........	..	..	..	..	2	1	1	..	..	1
Syracuse, N Y., High School	..	..	..	..	..	..	1			
Syracuse University, N. Y.........	..	..	..	..	1					
Tabor College, Iowa	..	..	..	..	..	..	..	1		
Taunton High School	1	1	..	2	..	..	..	4	1	
Trinity College, Conn.	1	..	..	..	..	..	..	..	8	
Tufts College....................	..	2								
University of California	..	..	..	2						
University of Kansas.............	..	..	..	..	..	..	1			
University of Michigan	..	..	..	1						
University of Mississippi	..	..	..	1						
University of Pennsylvania.......	..	..	..	..	..	..	..	..	1	1
University of Virginia............	..	..	..	1						
University of West Virginia	..	..	..	..	..	..	..	..	..	1
University of Wisconsin..........	..	..	..	1						
University School, San Francisco..	..	1	..	..	..	..	..	..	1	
Urban Academy, San Francisco ..	..	..	..	..	..	1	..	..	1	
Utica, N. Y., Academy	..	..	..	..	..	..	1			
Vermont Acad., Saxton's River ..	..	..	..	..	..	..	..	..	..	1
Waltham High School	..	..	..	1	2	..	1			
Warsaw, N. Y., Union School	..	..	..	..	..	..	..	1		
Washburne College, Kansas.......	..	..	1							
Washington University, Mo.......	..	..	..	..	..	2	..	2		
Watertown High School..........	..	..	..	..	..	1				
Wesleyan Academy, Wilbraham ..	..	1								
Westbrook, Me., Seminary	..	..	..	..	..	..	..	2		
West Newton Eng. & Class. School	2	1	1	..	1	..	2	2	1	1
Wm. Penn Charter School, Phila.	..	..	..	..	..	..	..	..	..	1

	1871.	1872.	1873.	1874	1875.	1876.	1877.	1878.	1879	1880.
Williams College	..	..	..	..	..	..	..	..	1	
Williston Seminary, East Hampton	1	2	2	..	3	4	1	2	1	1
Wilson & Kellogg, priv. sch., New York	..	..	..	..	..	..	..	2		
Winchester High School	..	..	1							
Wiscasset, Me., High School	..	..	..	..	..	..	1			
Woburn High School	3	..	..	2	1	1	..	..	1	2
Woodward High School, Cincin., O.	..	..	..	1						
Worcester High School	2	3	1	1	5	..	3	3	6	2
Yale College, Conn.	1	4	..	..	..	..	..	1	2	
Private Pupils	39	30	46	46	53	50	46	30	39	46

IV.

REPORT OF THE ASSISTANT IN CHARGE OF THE HERBARIUM AND MUSEUM OF THE ARNOLD ARBORETUM FOR THE YEAR ENDING AUGUST 31, 1880.

Work on the Herbarium and Museum was commenced Jan. 1, 1880. At that date the specimens previously collected by Professor Sargent, or otherwise received by donation, numbered 348 species and 1,073 specimens of unmounted plants.

During eight months, ending Aug. 31, 1880, 1,060 species and 2,736 specimens of dried plants were prepared at the herbarium or received by donation. A considerable number of these are New England plants prepared for foreign exchanges. In addition, 1,755 specimens of woods, cones, tree fruits, and other miscellaneous articles have been contributed. Among the specimens of woods received are many from North American trees collected by Professor Sargent, and a collection of 330 foreign species from the Herbarium of the Royal Gardens at Kew, England, received through the director, Sir Joseph Hooker. Fifty photographs and other plates of forest scenery have been contributed. Many of these are of large size and will form an important addition to the Museum.

During the year, 222 specimens have been distributed to 19 different persons and institutions. Of the dried plants, 510 species and 1,100 specimens have been poisoned and mounted in conformity with the plan adopted in all the larger herbaria. Specimens as prepared are placed in cabinets so constructed as to exclude, it is hoped, both dust and insects. The cabinets are made of cherry, about 27 inches square by 19 inches deep. Each cabinet, when filled, will contain from four to five hundred plants, and may be easily moved by one person. Besides the collection in cabinets, a large and nearly complete collection of North American pines and spruces has been temporarily arranged in boxes for more easy reference and study. A card catalogue of papers, notes, and essays relating to trees, arranged according to species, has been begun, which it is hoped will prove of assistance to persons engaged in the study either of the general subject or of any particular species.

A calendar has been kept of the time of flowering of trees and shrubs, native and exotic, in the vicinity of Boston, to which other notes of interest have been added. It is intended to continue this calendar from year to year for publication.

JOHN ROBINSON, *Assistant in charge.*

V.

EXAMINATIONS FOR WOMEN.

To the Faculty of Harvard College: —

The Committee of the Faculty appointed to take charge of the Examinations for Women have the honor to present their third Report.

Two examinations have been held since the Committee last reported, and in the tabular statement appended below the Committee give as full a record of facts with respect to every candidate examined as can well be made without the publication of names. It will be seen that the number of candidates coming to the preliminary examination for the first time in these two years was twenty-seven, making the whole number during the seven years for which the experiment has been tried one hundred and six. Seventeen received certificates, making thirty-six in all; and forty-five, having passed upon a part of the work and received credit therefor, are entitled to complete their examination, and thus to qualify themselves for the certificate. Three candidates passed the advanced examinations in 1879 and 1880, and received certificates therefor; one in languages and history, and two in languages alone. Of these candidates the two latter passed with distinction.

In their last Report, the Committee expressed the opinion that the time had not then come for determining the question as to the success of the system of examinations, and that the experiment had then entered upon an important stage of its progress, requiring further observation before any safe conclusion could be reached. A marked increase of numbers had taken place, especially in the fourth year of trial, and it remained to be seen whether this increase indicated any awakened demand for the advantages offered. The completion of the seventh year showed a probably permanent decline of numbers from their highest point, with some reason for expecting a tolerably regular but limited supply of candidates in the future, but with no good ground for expecting much growth, or for believing that the examinations had met any such generally felt want in the community as would alone justify the elaborate machinery of the system. If such a want had at any time existed, it appeared that the conditions of the case had been materially altered by the establishment and growth of several colleges for women since 1874,

CANDIDATES

AT THE PRELIMINARY EXAMINATIONS FOR WOMEN IN 1879 AND 1880.

NOTE. — In the following table, the letter G. shows that a subject was passed with a mark of 90 per cent or more; P., that it was passed, but with a mark lower than 90 per cent; *f.*, that the candidate failed to pass in the subject; ?, that she passed only in a part of the subject. "Credit for ——" means that the candidate divides the examination and has passed in the number of subjects stated.

Time and place of examination.	Number.	Age.	Schools attended.	How prepared for this examination.	Does she expect to teach?	Subjects and Results.												Decision.
						English.	French.	German.	Greek.	Latin.	Arithmetic.	Algebra.	Geometry.	Physics.	Botany.	Phys. Geog.	History.	
1879.																		
Cambridge.	84	20	—— Girls' High School.	By herself.	Yes.	P.				P.	*f.*	*f.*	*f.*				P.	Credit for 3.
"	[42]									*f.*		P.	P.		P.		*f.*	Credit only as in 1878.
"	85	16	—— Gram. and High Schools.	—— High School.	Uncertain.				P.	*f.*	P.	G.	P.					Credit for 4.
"	[45]										P.	P.	P.			P.		Certificate.
"	[47]									P.	P.	P.	*f.*			P.		Credit for 4.
"	86	17	Mr. ——'s school.	Mr. ——	No.	P.				P.	P.	?				P.		Credit for 4½.
"	[48]											P.	*f.*			P.		Credit only as in 1878.
"	87	19	Public schools.	By Miss ——.	Wishes to.	?	P.				G.	G.	P.			P.		Credit for 5½.
"	88	18	—— Gram. and Hi. Sch.	—— High School.	Yes.				P.	P.	*f.*	*f.*	*f.*		P.			Credit for 3.
New York.	[50]										G.	P.	P.	P.		P.	P.	Certificate.
"	[52]										*f.*	*f.*	*f.*	*f.*		*f.*		Credit only as in 1878.
"	[56]															P.		Certificate.
"	89	18	—— Free Academy.	Private teachers.	No.	*f.*	P.	G.			P.	*f.*	*f.*			P.		Credit for 4.
"	90	28	Private schools.		Perhaps.	P.	G.	P.							*f.*		P.	Credit for 4.
"	[58]											P.	P.	P.		G.		Certificate.
"	[59]										G.	G.	P.	P.		P.		Certificate.
"	91	35	Chiefly at home.	By herself.	Teaches.	P.	G.	P.			G.	G.	*f.*		P.	G.	G.	Credit for 8.
Philadelphia.	[63]															P.		Certificate.
"	92	25	—— College.		Yes.	*f.*					*f.*	*f.*	*f.*		*f.*	*f.*		No credit.

"	[65]						P.			P.		f.	f.				Credit only as in 1878.
"	[66]							P.				P.		P.			Certificate.
"	[69]					P.	G.							P.		P.	P. Certificate.
"	[71]					f.						P.	P.		f.	f.	P. Credit only as in 1878.
"	[73]					P.	P.				P.					P.		Credit for 4.
"	93	23	—. College.		No.	P.												Withdrew.
"	94	26	—Select school.	By herself.	Yes.						G.	P.	f.	f.		P.		Credit for 3.
Cincinnati.	95	18	Miss —'s school.	By Miss —.	No.					P.	P.	f.	f.					No credit.
"	96	18	Miss —'s school.	By Miss —.	Possibly.						f.	P.	P.		P.			Credit for 3.
"	97	19	— High School and — Univ.	Teacher in German only.	Teaches.	P.					f.	f.		P.		P.		Credit for 3.
"	[83]						P.								f.	P.		Credit only as in 1878.
1880																		
Cambridge.	98	20	— High School.		Yes.	P.	P.			P.	G.	f.	f.		P.	P.	f.	Credit for 6.
"	99	19	— High School.	— High School.	Yes.	P.			?		P.	f.		P.				Credit for 3½.
"	100	25	— Seminary.	By herself.	Yes.	P.	P.		P.		G.	P.	P.	P.		P.	P.	Certificate.
"	[86]						P.					P.	P.		G.		P.	Certificate.
"	[87]					P.				P.				P.			P.	Certificate.
New York.	101	22	— Normal Institute.	Teachers in Latin, French, and Mathematics.	Yes.	P.	P.			P.	P.	P.	P.	G.		P.	P.	Certificate.
"	[28]					P.		G.							G.	P.	P.	Certificate.
"	102	18	— Public schools.	By herself.	Teaches.	P.	P.	P.			G.	P.	f.	P.		P.	P.	Credit for 3.
"	[90]										P.	P.	P.	P.		P.		Certificate.
"	103	19	— Institute.	By Mr. —.	No.					f.	P.	f.	P.					No credit.
"	104	17	— Institute.	By Mr. —.	Yes.		P.				P.	P.	P.		G.			Credit for 5.
"	[61]						P.	G.			f.	f.	P.					Credit for 3.
Philadelphia.	105	18	Miss —'s School.		No.	P.	P.				P.	f.					P.	Credit for 4.
"	106	25	— Institute.	By Professor —.	Yes.	P.	G.			P.	P.	f.						Credit for 4.
"	[65]						P.			P.		P.	P.					Certificate.
"	107	19	Miss —'s School.		No.	P.	G.				P.	f.					P.	Credit for 4.
"	[83]						P.								P.	P.		Certificate.
Cincinnati.	108	21	— Seminary and — Coll.		Yes.	P.				f.				P.				No credit.
"	109	23	— College.		Yes.	P.		P.		P.					P.			Credit for 4.
"	[97]						P.			P.	P.	P.	P.				P.	Certificate.
"	110	20	Mrs. —'s Seminary.	By Mrs. —.	Yes.	?	P.			f.	P.	P.	P.		P.	P.	f.	Credit for 6½.

CANDIDATES

AT THE ADVANCED EXAMINATIONS FOR WOMEN IN 1879 AND 1880.

Time and place of examination.	Candidate's No. at her Prel. Exam.	Section.	Subjects.	Results.	Decision.
1879.					
New York.	56	Languages and History.	French. German. Reformation.	P. G. G.	Certificate.
"	57	Languages.	English. French. German.	P. 100 per c't P.	For English and French, Certificate "with distinction."
1880.					
Cambridge.	11	Languages.	French. German.	*f.* P.	No Certificate.
Philadelphia.	69	Languages.	French. Greek.	G. G.	Certificate "with distinction."

and a general increase of facilities for a higher education than had previously been easily attainable. That the examinations had had a considerable influence in stimulating both teachers and pupils in many schools appeared certain, but the stimulus given had not developed any desire for the submission of results to a recognized test. It was the opinion of the Committee, therefore, that the experiment which the Faculty had been asked to make had gone far enough to settle the questions which it was proposed to answer by its means. In the course of the discussion which followed, however, as to the best means of bringing the examination to a close, a strong desire was expressed by the Women's Education Association for a further trial, upon a radically different system; and with the consent of the Faculty notice was accordingly given, that in 1881 examinations will be held as follows: The subjects of examination will be identical with those required for admission to Harvard College, except that instead of Greek a certain preparation in French and German may be offered; the examinations will be simultaneous with those for admission to College in June, and the papers used will be the same; the division between two years will be allowed; and a certificate will be given to every successful candidate, stating that she has passed the examinations in whole or in part as the case may be.

It will be seen at once that the new scheme proposes a much less strict test of proficiency than the old one. In place of a critical examination on each subject, as searching as would be given to students in College where the results are to be carefully guarded, it substitutes the rapid and less exact examination, by which the simple sufficiency of preparation for admission is ascertained. In this respect, the certificate to be offered henceforth would appear likely to be less prized than that hitherto given. On the other hand, it was the opinion of persons deeply interested in the education of women that the identity of the subjects required with those in which young men are examined would practically open the examinations to many who are studying in schools having a regular course adjusted to the requirements of college preparation, while the subjection of students of each sex to the same test would in itself be a source of interest, not touched by the carefully arranged scheme of special work for women, contemplated by the original plan. And it was also the opinion of those who asked for the change that the range of attainments implied by the certificate could be easily understood, if a close correspondence with a certain known standard were established, whereas the real significance of the old certificate was not always comprehended.

In making the changes which should bring these views to the test of actual experiment, the Committee felt bound to offer to all candidates who had already passed a part of the old preliminary examination the opportunity for completing it; and, in accordance with a vote of the Faculty, to admit to advanced examinations any applicants who had already passed the preliminary examinations. Such persons will of course be examined with the same strictness of method as heretofore, and with the fulfilment of obligations incurred towards them the system first put in operation in 1874 will be brought to a close.

CHARLES F. DUNBAR, *Chairman.*

VI.

SUMMARY OF STUDENTS IN THE UNIVERSITY AT THE BEGINNING OF THE ACADEMIC YEAR 1879–80.

College,		
Seniors	171	
Juniors	201	
Sophomores	196	
Freshmen	245	
		813
Unmatriculated Students		15
Lawrence Scientific School		16
Bussey Institution		7
Dental School		15
Medical School		251
Law School		165
Divinity School		23
Candidates for the Degrees of A.M., Ph.D., and S.D.		41
Holders of Fellowships		7
Resident Graduates not Candidates for a Degree		3
		1356

Persons who attended the Summer Courses in Science in 1880.

Chemistry	25	
Botany	14	
Geology	5	
		44

Number of Certificates issued to Women in 1880.

Preliminary Examination	9
Advanced Examination	1

VII.

ACADEMIC HONORS FOR THE YEAR 1879-80.

COMMENCEMENT, JUNE 30, 1880.

Charles Wesley Bradley,	An Oration.
Harold North Fowler,	Do.
Edward Southworth Hawes,	Do.
Thaddeus Davis Kenneson,	Do.
Albert Barnes Weimer,	Do.
Albert Bushnell Hart,	Do.
William King Richardson,	Do.
Arthur Hale,	A Dissertation.
William Crawford Winlock,	Do.
John Jacob Thomsen,	Do.
David Mould,	Do.
Charles Benton Blair,	Do.
Josiah Quincy,	Do.
Jacob Brainerd Field,	Do.
Jacob Lane Pennypacker,	Do.
Frederic Dolbier Jordan,	Do.
Arthur Wendell Moors,	Do.
Frederick Hobbs Allen,	Do.
John Woodbury,	Do.
William George Pellew,	Do.
Louis Mayo Brown,	Do.
Frederic Jordan Ranlett,	Do.
John Wesley Houston,	Do.
Frederic Allison Tupper,	Do.
William George Taylor,	Do.
Henry Champion Jones,	Do.
Herbert Mills Perry,	Do.
Henry Cutler Baldwin,	Do.
William Howard White,	Do.
Louis May Greeley,	Do.
Arthur Taylor,	A Disquisition.
Frank Herbert Brackett,	Do.
James Geddes,	Do.
William Beverley Sharp,	Do.
Arthur Perry,	Do.
George Griswold,	Do.
Richard Middlecott Saltonstall,	Do.
Russell Bradford,	Do.
Francis Overton Suire,	Do.
Thomas White Nickerson,	Do.
Joseph Henry Gest,	Do.
George Reed Kelly,	Do.

William Andrews Pew,	A Disquisition.
George Baptist Hatch,	Do.
Charles Phelps Norton,	Do.
Nathaniel Cilley Bartlett,	Do.
Francis Faden Dodge,	Do.
Arthur Lee Hanscom,	Do.
Percy Kent,	Do.
Sherrard Billings,	Do.
Walter Allen Smith,	Do.
Frank Milton Gilley,	Do.
Jonathan Dwight,	Do.
George White Merrill,	Do.
Alfred Wilkinson,	Do.
Howard Townsend,	Do.
Leonard Eckstein Opdycke,	Do.
Charles Dudley March,	Do.
Walter Cole,	Do.
Eugene Dexter Russell,	Do.
George Murdock Perry,	Do.
James Torrey Howe,	Do.
William Henry Hills,	Do.
Samuel Cotton Gilbert,	Do.
Henry Wilson Savage,	Do.
Arthur Henry Lea,	Do.
Henry Eliot Guild,	Do.
Frederic Almy,	Do.
Wesley Francis Price,	Do.
Walter Horton Rhett,	Do.

Honors at Graduation.

1880.

In Classics.

Harold North Fowler,	Highest Honors.
Edward Southworth Hawes,	Do.
Thaddeus Davis Kenneson,	Do.
William King Richardson,	Do.
Henry Baily, A.B.,	Honors.
Henry Cutler Baldwin,	Do.
Edward Lowell Houghton,	Do.
William George Taylor,	Do.
Frederic Allison Tupper,	Do.

In Philosophy.

Charles Wesley Bradley,	Highest Honors.
Benjamin Rand, A.B.,	Do.

In Mathematics.

Arthur Hale,	Honors.
Herbert Mills Perry,	Do.

In History.

Albert Barnes Weimer,	Highest Honors.
Albert Bushnell Hart,	Honors.
John Woodbury,	Do.

In Physics.

James Brainerd Field,	Honors.
William Crawford Winlock,	Do.

In Chemistry.

Louis May Greeley,	Honors.
John Jacob Thomsen,	Do.

HONORABLE MENTION AT GRADUATION.

Frederick Hobbs Allen. *Greek; Latin; Philosophy.*
Frederic Almy. *Latin.*
Henry Cutler Baldwin. *Greek; Latin.*
Nathaniel Cilley Bartlett. *History.*
Sherrard Billings. *Greek; Latin; Philosophy.*
Charles Benton Blair. *English Composition; History; Fine Arts.*
William Tilden Blodgett. *German.*
Frank Herbert Brackett. *Music.*
Russell Bradford. *Philosophy.*
Charles Wesley Bradley. *English Composition; Philosophy.*
Louis Mayo Brown. *Italian and Spanish.*
Walter Cole. *Greek; Latin.*
John Doane. *Natural History.*
Frank Faden Dodge. *French; Music.*
James Brainerd Field. *Mathematics; Physics; Chemistry.*
Harold North Fowler. *Greek; Latin.*
James Geddes. *Italian and Spanish.*
Joseph Henry Gest. *History.*
Frank Milton Gilley. *Greek.*
Samuel Cotton Gilbert. *History.*
Louis May Greeley. *Chemistry.*
George Griswold. *German.*
Arthur Hale. *Mathematics.*
Arthur Lee Hanscom. *German.*
Albert Bushnell Hart. *English Composition; History.*
George Baptiste Hatch. *English Composition; Philosophy.*
Edward Southworth Hawes. *Greek; Latin.*
George Abbiah Hibbard. *German.*
William Henry Hills. *Latin; German.*
Charles Austin Hobbs. *Music; Mathematics; Chemistry.*
John Wesley Houston. *English Composition; History.*
Henry Champion Jones. *Natural History.*
Frederic Dolbier Jordan. *Philosophy.*
George Reed Kelly. *History.*

Thaddeus Davis Kenneson. *Greek; Latin.*
Percy Kent. *German; French.*
Arthur Henry Lea. *Mathematics.*
Charles Dudley March. *Latin; English Composition.*
George White Merrill. *Latin.*
Arthur Wendell Moors. *Greek; Latin; German.*
Charles Henry Morss. *Mathematics; Natural History.*
David Mould. *Philosophy; History.*
Thomas White Nickerson. *History.*
Charles Phelps Norton. *History.*
John Aloysius O'Keefe. *Greek; Latin; Political Economy.*
William George Pellew. *Greek; Latin; English Composition.*
Arthur Perry. *History.*
Herbert Mills Perry. *Mathematics.*
William Andrews Pew. *History.*
Wesley Frank Price. *Philosophy.*
Josiah Quincy. *Greek; Latin; English Composition; Political Economy.*
Frederick Jordan Ranlett. *English; English Composition; Philosophy; Natural History.*
Walter Horton Rhett. *Greek; Latin; Philosophy.*
William King Richardson. *Greek; Latin; English Composition; History.*
Theodore Roosevelt. *Natural History.*
Eugene Dexter Russell. *Philosophy; Chemistry.*
Richard Middlecott Saltonstall. *Natural History.*
Henry Wilson Savage. *French.*
William Beverly Sharp. *Mathematics.*
Walter Allen Smith. *English Composition; Political Economy.*
Frank Overton Suire. *Political Economy.*
Arthur Taylor. *Philosophy.*
William George Taylor. *Greek; Latin.*
John Jacob Thomsen. *Mathematics; Chemistry.*
Howard Townsend. *Latin; History.*
Frederic Allison Tupper. *Greek; Latin; Philosophy.*
Albert Barnes Weimer. *English Composition; Political Economy; History.*
William Howard White. *Greek; Latin; Political Economy.*
Alfred Wilkinson. *History.*
William Crawford Winlock. *Mathematics; Physics.*
John Woodbury. *English Composition; History; Fine Arts.*

SECOND-YEAR HONORS.

In Classics.

Gardiner Martin Lane,	Junior,	Highest Honors.
George Lyman Kittredge,	Sophomore,	Highest Honors.
Albert French Lane,	Do.	Do.
William Hobbs Manning,	Do.	Do.
George Morey Richardson,	Do.	Do.

Prescott Evarts,	Junior,	Honors.
Alfred Jaretzkie,	Do.	Do.
John Norton Johnson,	Do.	Do.
Harry Ellison Seaver,	Do.	Do.
Eugene Charles Upton,	Do.	Do.
Alfred Marston Allen,	Sophomore,	Honors.
Joseph Henry Beale,	Do.	Do.
Richards Merry Bradley,	Do.	Do.
Franklin Arthur Dakin,	Do.	Do.
Clarence Randall Dean,	Do.	Do.
Frederick Stanley Hall,	Do.	Do.
Charles Harvey Holman,	Do.	Do.
Albert Andrew Howard,	Do.	Do.
William Jones,	Do.	Do.
Charles Herbert McFee,	Do.	Do.
Edward Percival Merritt,	Do.	Do.
Charles Armstrong Snow,	Do.	Do.
Frederic Mather Stone,	Do.	Do.
Herbert Grafton Woodworth,	Do.	Do.

In Mathematics.

Arthur Orcutt Jameson,	Junior,	Highest Honors.
Joseph Henry Beale,	Sophomore,	Highest Honors.
Frank Nelson Cole,	Do.	Do.
John Whiting Mason,	Do.	Do.
William Lowell Putnam,	Do.	Do.
Joseph Emerson Hadley,	Junior,	Honors.
Asaph Hall,	Sophomore,	Do.
James Jay Greenough,	Do.	Do.
Joseph Ruggles Worcester,	Do.	Do.

VIII.

PRIZES.

Deturs.

The following students received books, called "Deturs," from the foundation of Edward Hopkins, for excellence in scholarship: —

Freshman of 1877–78.

Henry Edwards Scott.

Freshmen of 1879–80.

Angell Boss Babbitt,
Thomas Cogswell Bachelder,
Horace Binney,

Julius Buchman,
Robert Coit,
Joseph Randolph Coolidge,

Thomas Washington Cowgill,
Arthur Clark Denniston,
George William Evans,
Frank Britain Fay,
Charles Hall Grandgent,
Mellen Woodman Haskell,
Archie Livingstone Hodges,
Charles Joseph Hubbard,
Frank Elwood Jennison,
Frank Warton Kaan,
Alfred Church Lane,
Herbert Marshall Lloyd,
Morris Loeb,
George Emerson Lowell,
Edwin Guthrie McInness,
Frederick Nichols,
Robert Emmet O'Callaghan,
Oscar Edward Perry,
Herbert Putnam,
Charles Robertson Saunders,
Henry Lloyd Smyth,
Edward Perry Warren,
Alphonso Adelbert Wyman.

BOWDOIN PRIZES.

Josiah Quincy, of the Class of 1880,
Walter Allen Smith, of the Class of 1880,
William George Taylor, of the Class of 1880,
Alfred Jaretzkie, of the Class of 1881,
John Norton Johnson, of the Class of 1881.

BOYLSTON PRIZES FOR ELOCUTION.

First Prizes.

Leonard Eckstein Opdycke, of the Class of 1880,
Henry John Dixon Jones, of the Class of 1881.

Second Prizes.

William Andrews Pew, of the Class of 1880,
Morton Barrows, of the Class of 1880,
James Robbins Howe, of the Class of 1881.

LEE PRIZES FOR READING.

Sophomores.

Augustus Mendon Lord,
Herbert Putnam,
Charles Sumner Hamlin,
Joseph Randolph Coolidge,
Marshall Henry Cushing.

Freshmen.

Hollis Webster, from the Roxbury Latin School,
William Wallace Fenn, from the Boston Latin School,
Samuel Atkins Eliot, from J. P. Hopkinson's School,
Eugene Hamlin Hatch, from the Boston Latin School.

IX.

DEGREES.

Bachelors of Arts of the Class of 1880	161
Bachelors of Arts of Former Classes	8
Bachelors of Divinity	5
Bachelors of Laws	18
Bachelors of Laws of Former Classes	1
Doctors of Medicine	45
Doctors of Dental Medicine	5
Civil Engineers	2
Doctors of Philosophy	5
Masters of Arts	14

HONORARY DEGREES.

Masters of Arts.

Professor Edward Charles Pickering, of Harvard University.
Louis François de Pourtalès, of Harvard University.
Samuel James Bridge, of San Francisco.

Doctors of Laws.

Samuel Eliot, of Boston.
Alexander Schmidt, of Koenigsberg, Germany.
Professor Oliver Wendell Holmes, of Harvard University.
John Davis Long, Governor of Massachusetts.

X.

COMMITTEES OF THE OVERSEERS FOR 1880.

To visit the University.

President of the Board of Overseers.
His Excellency the Governor.
His Honor the Lieutenant-Governor.
The President of the Senate.
The Speaker of the House of Representatives.
The Secretary of the Board of Education.
The Secretary of the Board of Overseers.
The Chairman of each of the Visiting Committees.

To visit the Academical Department.

J. Elliot Cabot.
Charles Francis Adams.
Alexander McKenzie.
Edward E. Hale.
Theodore Lyman.
William R. Ware.
Henry Wheatland.
David F. Lincoln.
William J. Rolfe.
Christopher P. Cranch.

LeBaron Russell.
Francis G. Peabody.
Robert D. Smith.
Edwin P. Seaver.
John Fiske.
Ralph W. Emerson.
Henry Lee.
Henry James.
George B. Chase.
Charles C. Perkins.
Thomas W. Higginson.
S. Lothrop Thorndike.
John S. Dwight.
Oliver F. Wadsworth.
John Noble.
Richard T. Sprague.
Roger Wolcott.
J. B. Upham.
J. Lewis Stackpole.
James H. Means.
Arthur Dexter.
Joseph B. Warner.
William B. Swett.
George B. Bradford.
John T. G. Nichols.
Henry W. Foote.
R. M. Hodges.
Daniel B. Hagar.
Samuel M. Quincy.
Edward G. Porter.
Waldo Higginson.
Thomas Davidson.
William F. Apthorp.
Nathan H. Dole.
John O. Means.
Edward A. Park.
Francis Blake, Jr.
James C. Davis.
William P. P. Longfellow.
William Watson.
Robert Amory.
Russell Gray.
George L. Osgood.
George V. Leverett.
Charles O. Foster.
Charles A. Cummings.
Prentiss Cummings.
Walter C. Cabot.
E. T. Williams.
Charles P. Curtis.
Abbot Lawrence.
F. B. Sanborn.
W. H. Niles.
H. C. Lodge.

To visit the Divinity School.

Francis G. Peabody.
James Freeman Clarke.
Edward E. Hale.
Alexander McKenzie.
H. W. Bellows.
Edward W. Hall.
Adams Ayer.
Artemas B. Muzzey.
Franklin Johnson.
Waldo Higginson.
H. W. Foote.
C. F. Dole.

To visit the Law School.

John Lowell.
Leverett Saltonstall.
George O. Shattuck.
Oliver Wendell Holmes, Jr.
William G. Russell.
Darwin E. Ware.
E. R. Hoar.
William C. Endicott.
Robert D. Smith.
Moorfield Storey.
Francis E. Parker.

To visit the Lawrence Scientific School, the Bussey Institution, the Peabody Museum of American Archæology and Ethnology, and the Museum of Comparative Zoölogy.

Theodore Lyman.
Charles R. Codman.
Morrill Wyman.
R. M. Hodges.
Stephen Salisbury.
Edwin P. Seaver.
Benjamin S. Rotch.
Robert D. Hooper.
Gustavus Hay.
James Lawrence.
Channing Whitaker.
Charles O. Thompson.
T. Jefferson Coolidge.

To visit the Medical School and the Dental School.

LeBaron Russell.
Samuel A. Green.
Morrill Wyman.
Joseph Sargent.
Frederic Winsor.
John G. Park.
Richard M. Hodges.
George C. Shattuck.
Hall Curtis.
James L. Little.
Samuel L. Abbott.

To visit the Observatory.

James F. Clarke.
Charles F. Adams.
William Amory.
Charles R. Codman.
Amos B. Lawrence.
H. W. Bellows.
Henry A. Whitney.
Francis H. Peabody.
J. Ingersoll Bowditch.
George I. Alden.
Robert T. Paine.
J. Randolph Coolidge.
Robert C. Winthrop.
Charles F. Choate.
Alvan Clark.
Frederick O. Prince.
Augustus Lowell.
John C. Palfrey.

To visit the Library.

Phillips Brooks.
E. R. Hoar.
Samuel A. Green.
John Fiske.
Oliver Wendell Holmes, Jr.
William W. Greenough.
Charles A. Cutter.
George W. Wales.
Samuel F. Haven.
Charles C. Smith.
Samuel S. Green.
Stephen Salisbury, Jr.
Ralph W. Emerson.
Samuel Eliot.
Delano A. Goddard.
Francis V. Balch.
Henry G. Denny.
John M. Brown.
Charles Deane.
Henry F. Jenks.
James T. Fields.
Mellen Chamberlain.
George Dexter.

On the Treasurer's Accounts.

Leverett Saltonstall.
John Lowell.
Amos A. Lawrence.
Charles H. Parker.
Israel M. Spelman.
Henry Lee.
Nathaniel Silsbee.
George B. Chase.

On Elections.

Henry W. Paine.
Moorfield Storey.
George O. Shattuck.
John Lowell.
William C. Endicott.

On Reports and Resolutions.

William G. Russell.
William C. Endicott.
Henry W. Paine.
Robert D. Smith.
William Amory.
Darwin E. Ware.
Samuel A. Green.

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TREASURER'S STATEMENT.

To the Board of Overseers of Harvard College:—

The Treasurer of the College submits the Annual Statement of the financial affairs of the University, for the year ending August 31, 1880, in the usual form.

The Funds separately invested are as follows: —

	Principal.	Income.
UNIVERSITY.		
Leonard Jarvis Fund (part of),		
Real Estate in Baltimore,	$11,800.00	$665.00
COLLEGE.		
Bowditch Scholarships (part of),		
$70,000, Massachusetts 5% Bonds,	70,000.00	3,500.00
Shattuck Scholarships (part of),		
20 shares Cocheco M'fg. Co. Stock, sold during the year,		400.00
Bassett Scholarships (part of),		
Mortgage,	5,000.00	275.00
Pennoyer Scholarships (part of),		
Pennoyer Annuity in England,	4,444.44	277.50
Rumford Professorship (part of),		
French Rentes,	10,000.00	579.94
Jonathan Phillips Fund,		
Mortgage,	10,000.00	550.00
Daniel H. Peirce Fund (part of),		
Mortgage,	12,375.62	742.54
Samuel Ward's Gift,		
Ward's (Bumkin) Island, Boston Harbor,	1,200.00	50.00
Botanic Garden Fund (part of),		
$17,000 New York Central R. R. Bonds,	17,000.00	1,020.00
Herbarium Fund (part of),		
$12,000, Ionia & Lansing R. R. Bonds, transferred to general investments during the year,		480.00
Amounts carried forward,	$141,820.06	$8,539.98

Amounts brought forward, ...	$141,820.06	$8,539.98

LIBRARY.

Charles Minot Fund (part of),		
$60,000, Buffalo, Bradford, & Pittsb. R. R. Bonds,	60,000.00	4,200.00
Ichabod Tucker Fund (part of),		
Policy of Mass. Hospital Life Insurance Co., . .	5,000.00	200.00

MEDICAL SCHOOL.

George C. Shattuck Fund (part of),		
7 shares Stark Mills Co. Stock, sold during the year,		280.00

DIVINITY SCHOOL.

Adams Ayer Fund,		
$1,000, European & North American R. R. Bond,	1,000.00	none.

SCIENTIFIC SCHOOL.

James Lawrence Fund,		
$50,000, United States 6% Bonds, ...	50,000.00	3,000.00
John B. Barringer Fund (part of),		
40 shares Schenectady Bank Stock, ...	2,200.00	200.00

MUSEUM OF COMPARATIVE ZOÖLOGY.

Gray Fund for Museum,		
Boott Cotton Mill's note, ...	50,000.00	2,193.75
Sturgis Hooper Fund (part of),		
$20,000, Erie Basin Dock and Warehouse Bonds,	20,000.00	none.
Agassiz Memorial Fund (part of),		
$10,000, Summit Branch R. R. Bonds, sold during the year,		420.28
Personal note (endorsed), ...	8,000.00	400.00

OBSERVATORY.

Anonymous gift (now used to pay annuities),		
$1,000, Michigan South'n & No. Indiana R.R. Bond,	1,000.00	70.00
$2,000, Cincinnati Municipal Bonds, ...	2,000.00	140.00
$2,000 Minneapolis Municipal Bonds, ...	2,000.00	160.00
50 shares Pittsburg, Fort Wayne, & Chicago, R. R. Stock, ...	5,000.00	350.00

SPECIAL FUNDS.

Bussey Trust,		
Real Estate, ...	413,092.80	13,910.58
Gray Fund for Engravings (part of),		
$15,000, United States 5% Bonds, ...	15,000.00	750.00
Sever Hall Building Fund,		
Manufacturing Co.'s notes, paid during the year,		3,390.43
Robert Troup Paine Fund (accumulating),		
$17,000 Mass. 5% Bonds, ...	19,557.64	none.
	$795,670.50	$38,205.02

The other Funds of the College are invested as a whole. These investments, with the income thereof, are as follows:

Investments.	Principal, September 1, 1879.	Principal, August 31, 1880.	Income.
Notes, Mortgages, &c., ...	$955,603.74	$876,103.74	$55,595.27
Railroad Bonds and Premiums, . . .	432,704.86	889,598.70	29,442.98
Railroad Stock, ...	43,690.22	32,150.22	4,390.00
United States 5% Bonds, ...	190,781.25		6,937.50
New Boston Coal Mining Co. Bonds,	9,000.00	9,000.00	
Bank Stock, ...	63,964.00	63,964.00	4,358.97
Manufacturing Stock, ...	99,658.29	102,058.29	10,870.00
Real Estate, ...	904,011.30	905,511.30	56,456.85
Unoccupied Lands, ...	106,887.49	90,027.79	
Brattle Street Reversion, ...	1,000.00	1,000.00	
Advances to Scientific School, . . .	8,585.66	7,946.49	515.14
" " Dental School, ...	16,376.80	16,132.17	982.61
" " Bussey Trust, ...	39,726.13	40,566.13	2,007.31
" " Dining Hall Association,	40,232.16	38,732.16	2,413.98
" " Scudder's Catalogue, .	1,392.28	347.36	
" " Agassiz Building Fund,		6,559.50	76.36
" " Chinese Subscription,		311.53	
" for altering Appleton Chapel,	2,859.62	2,859.62	
" " repairing College Wharf,	1,119.12	777.46	78.34
Term Bills not collected August 31, .	76,801.67	75,644.85	
Baring Brothers & Co., ...	5,134.73	348.27	
Cash in Suffolk National Bank, .	7,621.52	3,174.94	
Cash in hands of Bursar, ...	7,360.53	1,071.06	
Totals of general investments,	3,014,511.37	3,163,885.58	174,125.26
Totals of special investments,	887,670.36	795,670.50	38,205.02
Amounts, . . .	$3,902.181.73	$3,959,556.08	$212,330.28

During the year, $12,000 of Ionia and Lansing R. R. bonds belonging to the Herbarium Fund have been transferred to the "general investments," that Fund being credited with their market value, which was $2,220 in excess of their cost, and the book valuation of the bonds being increased by a like sum. The book valuation of "unoccupied lands" has been reduced by the sum of $16,859.70, that being considered by the Corporation the simplest and most suitable way of restoring to the Funds the net gains of capital arising from sales of securities made during the year for account of "general investments." The premiums paid on $255,000 of seven per cent railroad bonds bought during the past three years have been transferred to a new account called "railroad bond premiums," and a sinking fund from the income has been provided to repay the premiums before maturity of the bonds. This arrangement has enabled the Corporation, without impairing the capital of the Funds, to take advantage of the relative cheapness of the old and best secured issues of railroad bonds, which bear a high rate of interest, the cheapness being largely due to the difficulty found by holders of private trust funds in dealing with premiums. Bonds costing only a small premium and those on which the premium was offset by previous purchases of like bonds below par have not been included in the provision for a sinking fund. All other changes in the investments of the University are accounted for by the receipts and payments hereinafter stated in detail. These changes have consisted chiefly in large purchases of railroad bonds, yielding about five and a half per cent after providing for premiums, in place of United States bonds and manufacturing companies' notes from which the income was much less. The changes were made in order to get more present income, but the Corporation still keep in short-dated notes and mortgages a very large sum, in expectation of the higher rates of interest which must sooner or later follow increasing prosperity and general confidence.

The net income of the general investments ($174,125.26) has been divided at the rate of $5\frac{65}{100}$ per cent among the Funds which they represent. The balance of $179.53 has been placed to the credit of the University account.

The rate of income this year as compared with that for 1878–79 shows a falling off of $\frac{3}{100}$ of one per cent, the gain in dividends from manufacturing stocks having been overcome by the very low rates of interest which prevailed throughout the year. The rate of income for 1880–81 is not likely to fall below five and one half per cent, unless a fire or other disaster should reduce the income from the real estate, but the expiration of a valuable old lease on Jan. 1, 1881, will offset any probable increase of income from other property.

The following table shows the income available for the departments dependent upon the College proper, and the expenditures in those departments: —

Interest on funds for		
University Salaries and Expenses,	$22,875.86	
College Expenses,	1,779.75	
Library,	1,036.50	
College Salaries,	29,932.55	
Gymnasium, and repairs on College buildings,	none.	
Cash received from undergraduates,	156,216.69	
Sundry cash receipts,	10,833.90	
		222,675.25
Expended for		
University Salaries and Expenses,	$33,753.24	
College Expenses,	28,831.17	
Library Salaries and Expenses (not books),	19,394.58	
College Salaries,	133,991.87	
Gymnasium Expenses, including apparatus,	8,191.14	
Repairs and insurance on College Buildings not valued on Treasurer's books,	8,070.52	
		232,232.52
Balance, showing deficit for the year, which has been charged off to Stock Account,		$9,557.27

In the University, College, and Library accounts the loss of rents from students' rooms, increased expenses for the new Gymnasium, including the salary of the Director, and large unusual outlays for the University account have overcome a net reduction in other expenditures and left a deficit of $9,557.27, which sum has been taken from the Stock account. In 1878–79 there was a surplus of $708.99. The fire in Stoughton Hall which occurred on December 15, 1879, the direct loss from which was covered by insurance, suggested to the Corporation the propriety of making some contribution to the resources of the Cambridge Fire Department, for which in times past the College provided an engine house. After consultation with the Mayor of Cambridge as to the best form of contribution, the sum of $3,000 was given to the city for the purchase of a chemical engine, and charged to the University account. The other large unusual payments were for the Quinquennial Catalogue and for the reception of the American Association for the Advancement of Science.

During the past summer heavy charges have been incurred to improve the College Yard and buildings, with a view to secure the health of the students and to make the College rooms more desirable. The best system of water-closets has been adopted for all the buildings, and steam heating apparatus has been put into University Hall for ventilating and warming all the water closets, as well as for heating part of University Hall and the entries of Thayer Hall and Matthews Hall. Brick, stone, and plank walks have been laid to connect the various buildings, and changes have been made to adapt University Hall and Holden Chapel to new uses occasioned by the occupation of Sever Hall for recitations. Only a small part of the cost of these improvements has been paid within the financial year, and the full payment for them must cause a large deficit for the year 1880–81. The College rooms were fully occupied at the beginning of 1880–81, — a beneficial change partly due to the lessening of rents in Thayer Hall, and partly perhaps to the above-mentioned improvements. While many of these outlays have been unusual, it is plain that each year must bring with it other occasions for special expenditure, if the University is to be properly carried on in all its departments.

In the Divinity School the income from the new endowment and a reduction in salary payments have made a surplus of $2,349.93, in spite of further loss of income from the Bussey Trust. For 1878–79 there was a deficit of $2,351.84.

In the Law School a considerable gain in the fees from students and a reduction in the payment for salaries have made a surplus of $1,767.15, in spite of further loss of income from the Bussey Trust. In 1878–79 there was a deficit of $4,557.01.

The Medical School has made a surplus of $10,377.54, notwithstanding large increase of expenditure upon apparatus and repairs. The number of students has been greater than in the preceding year, although the amount of fees appears to have been less, owing to the change in the form of account which was explained in the last Annual Report. In 1878–79 the surplus was $16,763.29.

In the Dental School there is a surplus of $244.63, the loss of fees from the Infirmary having been met by reduction of expenses. This surplus has been applied to reduce the debt of the School. In 1878–79 there was a surplus of $188.04.

In the Lawrence Scientific School a reduction of expenses has left a surplus of $639.17, which has gone to reduce the debt of the School. In 1878–79 there was a deficit of

$296.97. Mr. Alexander Agassiz has during the year advanced to the Agassiz Building Fund $6,559.50, for which he pays interest to the University, and this sum, with the balance of the Fund itself, and large private advances from Mr. Agassiz have been expended under his supervision in the extension of the Museum building.

In the Observatory the new subscriptions for current use have allowed a continuation of last year's expenditure, and left a surplus of $700.95. In 1878–79 the payment of many subscriptions in advance made a surplus of $7,490.92, besides repaying the previous year's deficit of $749.67.

In the Bussey Institution heavy reduction of expenses, chiefly in salaries, and an increase in fees from students, together with special gifts for salaries of Mr. Watson and Mr. Ford, have made a surplus of $648.30, in spite of further loss of income from the Bussey Trust and the Bussey Building Fund. In 1878–79 there was a deficit of $7,448.80.

The net income from the Bussey Trust has again fallen off in spite of a large reduction in outlays for insurance, taxes, interest, and repairs. Nearly all the stores yielded rent during the year at the rates made for short terms at the lowest point of depression in real estate. For the future the outlook is much better than it has been for several years. The stores are now in better condition than at any previous time. They are fully occupied, and new leases have been made, in place of several which expire in 1881, at rates nearly fifty per cent above those made at the lowest point. The improvement will not much increase the income for 1880–81, as the higher rates will be received for only part of the year, and considerable outlay must be made for the new tenants.

Gifts have been received during the year as follows:—

TO FORM NEW FUNDS OR INCREASE OLD ONES.

From Edward Russell, Esq., $125, to increase the scholarship founded by him.

From the executors of Rev. Daniel Austin $3500, on ac count of bequest of $7000, "to be used for some good College purpose or purposes at the discretion of the College government and their successors."

From the executors of Rev. Daniel Austin $500, on account of bequest of $1000, for the Divinity School.

From the trustees under the will of Abner W. Buttrick $10,000, to establish a trust fund "to pay the net income of said fund semi-annually to such deserving young men as they shall select, to aid them in preparing and educating themselves for the ministry of the Gospel."

From the executors of Jonathan Brown Bright $50,000, to be called the Bright Legacy; "the income of which shall be annually applied as follows: namely, one half of the same shall be divided into five scholarships, and the other half of said annual income shall be annually expended for books for the College Library."

The executors and residuary legatees of Mr. Bright generously paid the legacy of $50,000 nearly a year in advance of the time when it would be legally payable.

From the executors of Moses Day $5000, "to appropriate the net income thereof annually to assist needy and deserving young men to obtain an education at said Harvard College."

From Robert N. Toppan, Esq., $150, "to be used as a prize or prizes to be awarded in 1881 on Political Science in the graduate department of the University."

From the estate of Dr. Martyn Paine, on account of the Robert Troup Paine Fund, $24,207.02.

From the executors of William Munroe $10,140, on account of bequest of $15,000, "the income to be applied to the assistance of meritorious students needing pecuniary assistance."

From the executors of Charles Sumner $2,418.21, to be added to the amount heretofore received for the Sumner Book Fund.

Subscriptions for the increase of the Botanic Garden Fund, paid to September 1, from

Alexander Agassiz, . .	$1,000	Edward W. Hooper, . . .	$200
Mrs. J. Bradlee, ...	50	Miss Marian Hovey, . . .	100
A. P. Chamberlain, . . .	100	H. P. Kidder, ...	1,000
H. P. Curtis, ...	15	Theodore Lyman, ...	500
Mrs. Henry S. Grew, . . .	100	John Richardson, ...	100
			$3,165

Subscriptions for the further endowment of the Divinity School, paid to Sept. 1, $29,408.53, as by list following: —

A minister's widow	$100.
Abbot, Miss Annie W.	20.
Abbot, Prof. Ezra	100.
Allen, Rev. Joseph H.	40.
Ames, Rev. Charles G.	25.
Ball, Phineas	50.
Barrows, Rev. S. J.	33.34
Bartol, B. H.	500.
Beach, Rev. S. C.	20.
Bellows, Rev. Henry W.	100.
Bellows, Rev. Russell N.	25.
Bigelow, Alexander	50.
Blake, Rev. J. V.	5.
Blanchard, Rev. Henry	25.
Bliss, Harrison,	300.
Boston, East, Unitarian Soc., Rev. W. H. Cudworth	13.51
Boston, First Church, through Rev. Rufus Ellis	1,000.
Bond, Rev. H. F.	10.
Bradlee, Rev. C. D.	50.
Briggs, Rev. George W.	50.
Brookline, First Parish, through A. W. Goddard	263.
Brooklyn, L. I. Second Unitarian Church, Rev. John W. Chadwick	500.
Brooks, Rev. J. G.	200.
Brown, Rev. H. W.	10.
Buckingham, Rev. E.	10.
Buffalo, N. Y. First Unitarian Society	180.
Bullock, Miss Julia	500.
Burlington, Vt. First Congregational Church, through Rev. Edward H. Hall	215.
Bush, Rev. S. W.	25.
Cabot, Mrs. Susan B.	500.
Caldwell, Rev. J.	25.
Cambridge, First Parish, through F. L. Chapman, Treas.	300.50
Clark, E. W.	200.
Cole, Mrs. N. D.	150.
Dedham, First Parish, Rev. S. C. Beach	71.45
Devens, Rev. Samuel A.	100.
Dillingham, Rev. Pitt	12.50
Dixwell, E. S.	100.
Dole, Rev. C. F.	25.
Dorchester, First Parish	481.
Eliot, Charles W.	100.
Emery, Mark P., representing the First Parish of Portland, Me.	85.
Everett, Prof. C. C.	100.
Everett, Mrs. Stevens	25.
Felton, S. M.	500.
Fletcher, J. V.	25.
Foster, Calvin	25.
Framingham Unit. Church	270.
Frothingham, Rev. Frederick	250.
Gardner, Henry W.	250.
Germantown, Pa. Unitarian Society	165.
Gilman, Rev. Nicholas P.	10.
Green, Samuel S.	200.
Griffiths, Thomas	25.
Hall, Rev. Edward H.	20.
Hawes, Mrs. Susan F.	25.
Hedge, Rev. Frederic H.	50.
Hoar, George F.	50.
Hosmer, Rev. Frederick L.	100.
Howes, Miss Elizabeth	100.
Humphreys, Rev. Charles A.	30.
Kendall, Henry L.	500.
Kimball, Rev. J. C.	50.
Kinnicutt, F. H.	100.
Lea, Henry C.	100.
Lee, Miss Harriet R.	50.
Lee, Henry	300.
Lee, Mrs. John C.	50.
Leonard, Rev. George	25.
Lewis, Miss E. W.	25.
Lewis, Edward	100.
Lippitt, H.	100.
Little, James L.	500.
Lockwood, Mrs. Alice	100.
Lombard, Rev Charles P.	5.
Mack, Dr. William	50.
Mann, Rev. N. M.	20.
Mason, James S.	150.
Metcalf, Jesse	200.
Miller, Mr. & Mrs. Henry W.	75.

(Continued.)

Subscriptions for the Divinity School (continued): —

Milton, First Religious Society, through Rev. Frederick Frothingham	137.
Minot, George R.	25.
Moore, Mrs. Clara J.	1,000.
Moseley, Rev. W. O.	500.
Muzzey, Rev. A. B.	100.
Newton, West, Unitarian Society	65.13
Nightingale, Mrs. H. R.	20.
Osgood, Rev. E. Q. S.	5.
Owen, G. S.	100.
Peabody, Rev. Francis G.	25.
Peabody, George	200.
Pearce, Edward	500.
Pierce, Henry L.	1,000.
Richmond, Mrs. Anna	4,000.
Richmond, Miss Caroline	500.
Rochester, N. Y. Unitarian Society	112.
Rogers, Henry B.	1,000.
Roxbury, First Religious Society	303.
Salem, North Church, through Rev. E. B. Willson	50.
Salem, Barton Sq. Society, Rev. George Batchelor	30.
Salisbury, Stephen	1,000.
Salisbury, Stephen, Jr.	300.
Sallaway, Rev. James	5.
Salter, Rev. W. M.	25.
Shaw, Mrs. Pauline A.	200.
Sheafe, Rev. Joseph P.	10.
Silsbee, Rev. William	10.
Small, Robert H.	50.
Spaulding, Rev. H. G.	20.
Stone, Benjamin W.	100.
Swett, Samuel W.	400.
Taunton, First Congregational Church, Rev. F. Meakin	300.
Thayer, Rev. George A.	50.
Thayer, Nathaniel	3000.
Tindell, Rev. Charles H.	5.
Tolman, Albert	25.
Tower, C.	1,000.
Troy, N. Y. Unitarian Society, John Flagg, Treas.	60.10
Waltham, First Parish	61.
Waltham, First Parish, by William E. Bright	100.
Ware, Rev. L. G.	15.
Weeden, William B.	1,000.
Weld, Francis M.	200.
West, Mrs. George and Miss Mary E.	100.
Wheatland, Stephen G.	100.
Whitney, Edward	100.
Winkley, Rev. S. H.	10.
Woodbury, Rev. Augustus	100.
Young, Prof. E. J.	100.
	$29,408.53

GIFTS FOR IMMEDIATE USE.

Subscriptions for Chinese Instruction, paid to Sept. 1, from

Martin Brimmer	$333.33
J. Caswell & Co.	250.
D. O. Clark	166.67
George B. Dixwell	334.
Henry S. Grew	$500.
James L. Little	500.
E. R. Mudge	333.34
George C. Richardson	333.33
	$2,750.67

Subscriptions for Mr. Ford's salary, paid to Sept. 1, from

Greely S. Curtis	$50
J. G. Cushing	50
Amos A. Lawrence	25
H. S. Russell	$50
Francis Shaw	25
	$200

Subscription for Mr. Watson's salary, paid to Sept. 1, from

A friend	$100	Miss Rose Whiting	$150
W. W. Goodwin	100	Thomas William Whiting	150
W. G. Russell	100		
			$600

Subscriptions for the Observatory, paid to Sept. 1, from

Adams, Charles Francis	$100	Hooper, Mrs. S.	100
Ames, Fred. L.	100	Hunnewell, H. H.	100
Amory, William	400	Lodge, Mrs. Anna C.	50
Beal, James H.	50	Lowell, Augustus	50
Bowditch, J. I.	400	Mudge, E. R.	100
Bremer, John L.	100	Norcross, Otis	100
Brimmer, Martin	100	Paine, Charles J.	50
Cabot, W. C.	50	Payson, Samuel R.	50
Choate, Charles F.	100	Pickering, E. C.	200
Coolidge, T. Jefferson	100	Pickman, William D.	100
Curtis, Charles P.	100	Phillips, John C.	100
Dalton, Charles H.	50	Robbins, R. E.	50
Davis, James	100	Sears, Mrs. David	100
Emerson, G. B.	50	Sears, F. R.	50
Fay, R. S.	50	Shattuck, G. O.	50
Forbes, Mrs. J. M.	200	Shaw, Mrs. Cora L.	30
Forbes, J. M.	100	Thayer, Nathaniel	100
Gardner, George	50	Upham, George P.	50
Gardner, John L.	100	Weld, W. G.	50
Grew, Henry S.	50	Wheelwright, A. C.	50
Grover, W. O.	50	Whitney, H. A.	50
Hemenway, Mrs. A.	100	Wigglesworth, Misses	100
Higginson, George	100	Winthrop, Robert C.	50
			$4,330

From George W. Wales, Esq., $200, for books for the Library, in continuance of former gifts for the same purpose.

From an anonymous friend, $500, to increase the salary of the Professor of Entomology.

From an anonymous friend $500, for the salary of the Instructor in Political Economy.

From William B. Weeden, Esq., $100, to aid in publishing Library Bulletins.

For Lecturer on Political Economy, through William Gray, Esq., Treas., $300.

Through Professor Asa Gray, an anonymous gift for boiler for Botanic Lecture room, $300; also an unexpended balance of last year's Herbarium subscription, amounting to $583.70.

From Augustus Hemenway, Esq., $3000, for apparatus for the Hemenway Gymnasium.

From John Amory Lowell, Esq., $1000, for immediate use at the Botanic Garden; and from an anonymous friend $500, for the same purpose.

From B. M. Watson, Jr., Esq., $7.60, for books for the Bussey Institution.

From George Higginson, Esq., Treasurer of the Medical School Building Fund, $54,545.20, to be used towards payment for Boylston St. land.

The total amount of these gifts for immediate use is $69,417.17, as is also stated in the account on p. 16 of this report.

The executors of Walter Hastings have notified the President and Fellows of a large bequest which will ultimately be of great service to the University, but the bequest is subject to provisions which render it unavailable for present needs.

EDWARD W. HOOPER,
Treasurer.

BOSTON, Dec. 21, 1880.

ACCOUNTS.

1879-80.

General Statement of Receipts and Disbursements for the year ending

INCOME.

Interest on notes, mortgages, and advances, ...		$69,220.68
" " United States 6% Bonds, ...		3,000.00
" " " " 5% "		7,687.50
" " Massachusetts 5% Bonds, ...		3,500.00
" " Policy Mass. Hospital Life Insurance Co., ...		200.00
" " Railroad Bonds.		
Buffalo, Bradford, and Pittsburg, . . .	4,200.00	
Burlington & Mo. River in Iowa, 8%, . .	801.34	
" " " in Iowa, 7%, . .	3,500.00	
" " " in Nebraska, . .	2,745.00	
Chicago, Burlington, and Quincy, . . .	3,081.12	
Eastern, ...	2,000.00	
Ionia and Lansing, ...	8,247.57	
Michigan Southern & Northern Indiana,	70.00	
Nebraska, ...	2,663.89	
New York Central, ...	1,680.00	
Philadelphia, Wilmington, and Baltimore,	4,266.67	
Republican Valley, ...	1,957.39	
Summit Branch, ...	420.28	
		35,633.26
" " Municipal Bonds.		
Cincinnati, ...	140.00	
Minneapolis, ...	160.00	
		300.00
Dividends on Stocks.		
Charles River National Bank, ...	420.00	
First (Cambridge) " "	400.00	
Fitchburg " "	180.00	
Massachusetts " "	132.00	
Merchants " "	1,584.00	
New England " "	277.50	
Old Boston " "	500.00	
Schenectady " " (N. Y.),	200.00	
Bank taxes refunded, ...	865.47	
		4,558.97
Amoskeag Manufacturing Co., ...	1,200.00	
Cocheco " "	400.00	
Massachusetts " "	420.00	
Merrimack " "	1,530.00	
Nashua " "	1,800.00	
Pacific Mills " "	4,400.00	
Stark Mills " "	1,240.00	
Wamsutta " "	560.00	
		11,550.00
Chicago, Burlington, and Quincy R. R.,	3,975.00	
Pittsfield and North Adams Railroad, . .	315.00	
Quincy Railroad Bridge Company, . . .	100.00	
Pittsburg, Ft. Wayne, & Chicago R. R.,	350.00	
		4,740.00
Amount carried forward, ...		$140,390.41

by the Treasurer of Harvard College, August 31, 1880.

EXPENSES.

Paid to account of Expenses in the

University, as per Table I. (page 34), ...		$42,309.73
College, " " II. (page 36).		
Salaries for instruction, ...	133,991.87	
Repairs, ...	7,723.89	
Insurance on College Edifices, not valued on Treasurer's books, ...	346.63	
General Expenses, ...	28,831.17	
Scholarships, ...	24,025.27	
Beneficiaries, ...	1,153.87	
Prizes for Reading, &c., ...	1,254.11	
Botanic Garden, ...	5,758.06	
Herbarium, ...	1,266.21	
Gymnasium, ...	8,191.14	
		212,542.22
Library, as per Table III. (page 41).		
Books, ...	8,010.35	
Salaries and other expenses, ...	19,394.58	
		27,405.43
Divinity School, as per Table IV. (page 42).		
Salaries and other expenses, ...	14,836.21	
Scholarships, ...	1,223.34	
		16,059.55
Law School, as per Table V. (page 44), ...		27,461.24
Medical School, as per Table VI. (page 45), ...		130,846.88
Dental School, as per Table VII. (page 46), ...		2,773.15
Lawrence Scientific School, as per Table VIII. (page 47).		
Salaries and other expenses, ...	15,223.88	
Museum of Comparative Zoölogy, ...	35,496.85	
		50,720.73
Observatory, as per Table IX. (page 48), ...		16,314.68
Bussey Institution, as per Table X. (page 48),	5,591.69	
Arnold Arboretum, as per Table X. (page 48),	5,880.98	
		11,472.67
Amount carried forward		$537,906.28

General Statement of Receipts and Disbursements for the year ending

INCOME.

Amount brought forward, ...		$140.390.41
Real Estate, from rents, &c. (gross receipts).		
Cambridge (Houses and Lands), ...	33,158.53	
Boston (general investments), ...	41,017.70	
Bussey stores, ...	25,547.48	
Sundry estates, ...	8,192.19	107,915.90
Term Bills.		
College, as per Table II., ...	156,216.69	
Divinity School, as per Table IV., ...	2,525.81	
Law School, as per Table V., ...	23,701.24	
Medical School, as per Table VI., ...	51,985.71	
Dental School, as per Table VII., ...	2,142.98	
Lawrence Scientific School, as per Table VIII., .	2,505.00	
Bussey Institution, as per Table X., ...	868.00	239,945.43
Sundries.		
From Wm. Pennoyer Annuity, ...	277.50	
Trustees of Thayer Scholarships, ...	3,600.00	
" Count Rumford's Legacy, . . .	579.94	
" Edward Hopkins, ...	230.32	
Pew rents in Appleton Chapel, ...	183.00	
For use of Library by resident graduates and others,	140.00	
Degrees of A.M. and Ph.D., ...	830.00	
Degree of Batchelor of Arts out of course, and Examination fees, ...	196.75	
Fees in Infirmary & Laboratory, Dental School, . .	582.30	
Printing by College Press for other Departments, .	717.70	
Sales of wood, grass, &c., ...	581.25	
Sales of old examination papers, ...	56.99	
Sale of time signals from Observatory, ...	2,942.50	
Sale of tickets to Commencement Dinner of 1880, .	519.00	
Sale of books, pamphlets, catalogues, &c., ...	1,945.16	
Use of Sanders Theatre by Societies, ...	133.47	
Use of lockers at Gymnasium, ...	1,237.50	
Divinity Boarding Club balance, ...	279.07	
Returned by Beneficiaries, ...	305.00	
Fees for instruction in Chinese, ...	30.00	
From Insurance Co.'s for losses by fires in Stoughton and Hollis Halls, ...	1,865.00	16,732.45
Sundry gifts for immediate use, see page 12, ...		69,417.17

RECEIPTS EXCLUSIVE OF INCOME.

GIFTS.

Edward Russell Scholarship (additional), ...	125.00	
Daniel Austin Fund for College (part), ...	3,500.00	
" " " " Divinity School (part), . .	500.00	
Amounts carried forward, . . .	$4,125.00	574,401.36

by the Treasurer of Harvard College,
August 31, 1880.

EXPENSES.

Amount brought forward,				$537,906.28
Real Estate, expenses.				
Insurance.				
Cambridge,	285.00			
Boston,	352.00			
Bussey stores,	105.48			
		742.48		
Taxes.				
Cambridge,	2,567.48			
Boston,	5,050.00			
Bussey stores, &c.,	5,914.25			
		13,531.73		
Interest.				
Cambridge (on advances),	420.00			
Bussey stores (on advances),	2,007.31			
		2,427.31		
Repairs, improvements, care, cleaning and sundries.				
Cambridge,	8,880.65			
Boston,	164.25			
Bussey stores,	1,726.95			
		10,771.85		
Heating and hoisting for Bussey stores,	3,257.91			
Less for sales of heat and power,	1,375.00			
		1,882.91		
				29,356.28
Annuities.				
Bussey,		6,900.00		
Gore,		900.00		
Mary Osgood,		360.00		
Lucy Osgood,		780.00		
Class of 1802,		134.29		
Anonymous,		720.00		
Bemis,		2,840.00		
				12,634.29
Sundry payments from income.				
To the Treasurer of the Museum of Fine Arts, from Gray Fund for Engravings,		950.00		
For book of engravings from accumulated income of Gray Fund for Engravings,		1,085.45		
The income of the Daniel Williams Fund for the benefit of the Herring Pond and Mashpee Indians,		925.35		
The income of the Sarah Winslow Fund, to the Minister and Teacher at Tyngsboro', Mass.,		268.66		
Chinese Instruction, expenses,		4,062.15		
To lecturer on Political Economy,		300.00		
Subscriptions from College officers for Pension System repaid,		690.00		
Robert Troup Paine Fund, expenses,		47.25		
				8,328.86
Amount carried forward,				$588,225.71

General Statement of Receipts and Disbursements for the year ending

INCOME.

Amounts brought forward, ...		$4,125.00	$574,401.36
GIFTS (continued).			
Abner W. Buttrick Fund for Divinity School, . . .		10,000.00	
Subscriptions for Divinity School, ...		29,408.53	
Bright Legacy, ...		50,000.00	
Moses Day Fund, ...		5,000.00	
Subscriptions for endowment of Botanic Garden, . .		3,165.00	
Robert Troup Paine Fund, ...		24,207.02	
Munroe Fund (part), ...		10,140.00	
Charles Sumner Book Fund (additional), ...		2,418.21	
Robert N. Toppan Prizes, ...		150.00	
			138,613.76
SALES.			
$100,000 Phil., Wilm. & Baltimore R. R. Bonds, . . .		104,250.00	
185,000 United States 5% Bonds, ...		190,415.62	
16,000 Chicago, Burl. & Quincy R. R. 5% Bonds, .		16,200.00	
10,000 Summit Branch R. R. Bonds, ...		10,000.00	
24,000 Burl. & Mo. River (Iowa) 8% R. R. Bonds (converted), ...		27,954.67	
Chicago, Burl. & Quincy R. R. Stock, 320 shares, . .		45,670.00	
Cocheco Manufacturing Co. Stock, 20 shares, ...		14,865.00	
Stark Mills, 7 shares, ...		9,292.50	
St. Paul & Duluth R. R. Stock, 36 shares, ...		2,475.00	
New England Glass Co., 1 share, ...		82.75	
$1,000 Burl. & Mo. Riv. (Neb.) R. R. called bond, paid off,		1,000.00	
Real Estate in Woburn, obtained by foreclosure, . . .		1,500.00	
			423,705.54
SUNDRIES.			
Notes and Mortgages paid off, ...	$1,375,562.50		
Less invested in Notes and Mortgages,	1,221,062.50	154,500.00	
Drafts on Baring Brothers & Co., . . .	8,276.31		
Less paid them on account, ...	3,489.85	4,786.46	
Amoskeag Manuf. Co.'s Stock dividend (12 sh. Amory Manuf. Co.), ...		1,200.00	
Chicago, Burling. & Quincy R. R. Co.'s Stock dividend (20% on 300 shares), ...		6,000.00	
From Dining Hall Association, to reduce debt, . . .		1,500.00	
Advances to accrued interest on R. R. bonds purchased repaid, ...		5,671.48	
Advances to College Wharf repaid, ...		341.66	
			173,999.60
Balance, September 1, 1879.			
Cash in Suffolk National Bank, ...		7,621.52	
Cash in hands of Allen Danforth, Bursar, ...		7,360.53	
Term Bills not collected, ...		76,801.67	
			91,783.72
			$1,402,503.98

by the Treasurer of Harvard College,
August 31, 1880.

EXPENSES.

Total of expenses brought forward, ...	$588,225.71

INVESTMENTS AND SUNDRY PAYMENTS.

Atch., Topeka & St. Fé R. R. Bonds, 5%,	$100,000	cost,	95,027.78	
" " " " " 1st mort. 7%,	50,000	"	58,306.90	
Republican Valley R. R. Bds., E. D. 6%,	200,000	"	206,272.10	
Ionia & Lans. R. R. Bds., 1st mort. 8%,	20,000	"	23,536.88	
" " " " 2d " 8%,	70,000	"	72,675.55	
Kans. City, St. Joseph & Council Bluffs R. R. Bds., 1st mort. 7% (special lien),	50.000	"	60.947.22	
Mass. Bonds, 5%, 1894 (for Paine Fund),	17.000	"	19,557.64	
Burl. & Mo. River (Nebraska) R. R. Bds. 6's, ...	1,000	"	1,025.00	
Burl. & Mo. River (Iowa) R. R. Bonds, L. G. 7%, ...	19,000	"	22,368.56	
Burl. & Mo. River (Iowa) R. R. Bds. 8% (convertible), ...	4,000	"	4,850.00	
Nebraska R. R. Bonds, 7%, ...	36,000	"	42,170.00	
Amory Manufacturing Co., 24 shares, ...		"	2,400.00	
Chicago, Burl. & Quincy R. R. Stock, 240 shares, received in exchange for $24,000 Burl. & Mo. River (Iowa) R. R. Bonds, ...		"	27,954.67	
				637,092 30
Amory Manuf. Co.'s Stock, 12 shares received as Stock dividend on Amoskeag Stock, ...				1,200.00
Chicago, Burl. & Quincy R. R. Stock, Stock dividend 60 shares, .				6,000.00
Paid on account of building Sever Hall, ...				86,255.12
" " " " alterations to Andrews Estate, ...				3,000.00
" city of Boston, betterment on Bussey Real Estate, ...				840.00

Balance, August 31, 1880.		
Cash in Suffolk National Bank, ...	3,174.94	
Cash in hands of Allen Danforth, Bursar, ...	1,071.06	
Term Bills not collected, ...	75,644.85	
		79,890.85
		$1,402,503.98

The following Account exhibits the State of the Property, as embraced in the Treasurer's Books, August 31, 1880.

Notes and Mortgages.				
Mortgages			$513,479.36	
Long Wharf Co.'s Notes			60,000.00	
Phil., Wil. & Balt. R. R. Notes			200,000.00	
Manufacturing Co.'s Notes			180,000.00	
Personal Note (endorsed)			8,000.00	$961,479.36
United States 6% Bonds,	$50,000	valued at		50,000.00
United States 5% Bonds,	15,000	" "		15,000.00
Massachusetts 5% Bonds,	87,000	" "		89,557.64
*New Boston Coal Mining Co. Bonds,	10,000	" "		9,000.00
*Erie Basin Dock & Warehouse "	20,000	" "		20,000.00
Municipal Bonds.				
*Cincinnati,	2,000.00	valued at	2,000.00	
*Minneapolis,	2,000.00	" "	2,000.00	4,000.00
Railroad Bonds.				
Atch., Top., and St. Fé, 5%,	100,000	val'd at	94.000.00	
" " " 1st Mortg., 7%,	50,000	" "	50,000.00	
*Buffalo, Bradford, and Pittsburg,	60,000	" "	60,000.00	
Burl'n & Mo. River in Iowa, 7%,	69,000	" "	69,000.00	
" " " in Nebraska, 6%,	50,000	" "	50,863.75	
Chicago, Burl'n, and Quincy, 7%,	31,000	" "	32,200.00	
Eastern,	50,000	" "	48,000.00	
*European and North American,	1,000	" "	1,000.00	
Ionia and Lansing, 1st Mortg. 8%,	92,000	" "	84,640.00	
" " " 2d " "	70,000	" "	70,000.00	
Kan.City, St.Jos.&C.B. 1st M., 7%,	50,000	" "	50,000.00	
*Michigan So. and No. Indiana,	1,000	" "	1,000.00	
Nebraska (guaranteed), 7%,	86,000	" "	86,000.00	
New York Central, 6%,	28,000	" "	27,000.00	
Republican Valley, E. D. 6%,	200,000	" "	203,506.00	
Railroad Bond Premiums,			41,388.95	968,598.70
Railroad Stock.				
Chicago, Burlington, and Quincy,	360	shares,	24,600.22	
*Pittsburgh, Fort Wayne and Chicago,	50	"	5,000.00	
Pittsfield and North Adams,	63	"	6,300.00	
Quincy R. R. Bridge Co.,	10	"	1,250.00	37,150.22
Manufacturing Stock.				
Amory,	36	shares,	3,600.00	
Amoskeag,	12	"	10,800.00	
Massachusetts Mills,	7	"	6,600.00	
Amounts carried forward.			$21,000.00	$2,154,785.92

*Received as gifts.

Amounts brought forward,		$21,000.00	$2,154,785.92
Manufacturing Stock (continued).			
Merrimack,	17 shares,	17,000.00	
Nashua,	36 "	25,560.00	
*New Bedford Copper Co.,	5 "	250.00	
Pacific Mills,	20 "	17,468.29	
Stark Mills,	12 "	11,900.00	
Wamsutta Mills,	80 "	8,880.00	
			102,058.29
Bank Stock.			
Charles River,	60 shares,	6,000.00	
First Cambridge,	50 "	5,000.00	
Fitchburg,	24 "	2,403.00	
Massachusetts,	12 "	3,000.00	
Merchants,	264 "	34,732.00	
New England,	37 "	3,896.00	
Old Boston,	200 "	8,933.00	
*Schenectady (N. Y.),	40 "	2,200.00	
			66,164.00
Real Estate.			
Houses and Lands in Cambridge yielding income,		357,163.83	
Unimproved Lands in Cambridge,		90,027.79	
Bussey Real Estate in Boston and Dedham,		413,092.80	
Amory Estate, Franklin Street, Boston,		165,615.81	
Webb Estate, Washington Street, Boston,		164,604.79	
Andrews Estate, Washington Street, Boston,		150,000.00	
Estate on Hawley Street, Boston,		38,650.78	
Estate on Hawkins Street, "		29,476.09	
Jarvis Estate, Baltimore,		11,800.00	
Ward's (Bumkin) Island, Boston Harbor,		1,200.00	
Reversion of Buildings on Brattle Street, Boston,		1,000.00	
			1,422,631.89
Sundries.			
In hands of Count Rumford's Trustees in Paris,		10,000.00	
Annuity of William Pennoyer, valued at		4,444.44	
Policy of the Mass. Hospital Life Insurance Co.,		5,000.00	
Due from Dining Hall Association,		38,732.16	
" " Lawrence Scientific School,		7,946.49	
" " Bussey Trust,		40,566.13	
" " Dental School,		16,132.17	
Advances to Scudder's Catalogue,		347.36	
" " Agassiz Building Fund,		6,559.50	
" " Chinese Subscription,		311.53	
Balance of account for decorating Appleton Chapel,		2,859.62	
" " " " repairing College Wharf,		777.46	
Term bills not collected August 31, 1880,		75,644.85	
Baring Brothers & Co.,		348.27	
			209,669.98
Cash in Suffolk National Bank,		3,174.94	
" " hands of Allen Danforth, Bursar,		1,071.06	4,246.00
		Total	$3,959,556.08

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* Received as gifts.

The foregoing Property represents the following Funds and Balances, and is answerable for the same.

UNIVERSITY FUNDS.

Principal, Sept. 1, 1879.		Principal, Aug. 31, 1880.	
$160,600.35	Stock Account (so called), ...	$151,043.08	
141,638.74	Insurance and Guaranty Fund (so called),	141,638.74	
5,250.00	**Samuel D. Bradford** Fund, ...	5,250.00	
15,750.00	**Israel Munson** Fund, ...	15,750.00	
17,004.97	**Leonard Jarvis** Fund, ...	17,004.97	
3,257.54	**Peter C. Brooks** Fund for building a President's House, ...	1,435.12	
155.82	**Thomas Cotton** Fund, ...	155.78	
58,063.66	**John Parker** Fellowships, ...	56,944.28	
10,587.54	**Harris** Fellowships, ...	10,585.77	
12,454.16	**John Thornton Kirkland** Fellowship,	12,407.81	
26,639.92	**Graduates'** Scholarship, ...	27,345.08	
1,436.09	**Sumner** Prize Fund, ...	1,517.22	
43,339.32	**Winn** Prof. of Ecclesiastical History, .	43,987.97	
20,000.00	**Sever** Fund (unrestricted)	20,000.00	
1,002.39	Gift for Pension System	1,059.00	
	Robert N. Toppan Prizes	150.00	
			506,274.82
	COLLEGE FUNDS.		
27,748.64	**Alford** Professorship, ...	27,748.64	
28,337.40	**Boylston** "	28,337.40	
21,619.50	**Eliot** "	21,619.50	
10,000.00	" " (**Jon. Phillips's gift**),	10,000.00	
3,500.01	**Erving** "	3,500.01	
35,990.99	**Fisher** "	35,990.99	
20,217.08	**Hersey** "	20,217.08	
15,799.95	" " (**Thomas Lee's gift**),	16,692.65	
3,747.33	**Hollis** " (Mathematics), . .	3,747.33	
29,295.24	**Hollis** " (Divinity), . . .	30,950.41	
43,062.93	**McLean** "	43,062.93	
21,000.00	**Perkins** "	21,000.00	
25,020.19	**Plummer** "	25,020.19	
52,500.00	**Pope** "	52,500.00	
52,996.37	**Rumford** "	52,996.37	
23,139.83	**Smith** "	23,139.83	
16,240.38	Fund for Permanent Tutors, ...	16,240.38	
125,000.00	**Class Subscription** Fund, ...	125,000.00	
12,547.24	**Daniel H. Peirce** "	12,622.46	
1,728.13	**Paul Dudley** Fund for Lectures, . .	1,825.76	
31,500.00	**Jonathan Phillips** Fund (unrestricted)	31,500.00	
1,050.00	**John A. Blanchard** " "	1,050.00	
2,905.85	**John W. P. Abbot** " "	3,070.04	
	Daniel Austin " "	3,640.04	
$1,122,127.56	. . . . . . Amounts carried forward,	$611,472.01	506,274.82

Principal, Sept. 1, 1879.		Principal, Aug. 31, 1880.	
$1,122,127.56	. . . . Amounts brought forward,	$611,472.01	506,274.82
346.36	**Henry Flynt's** Bequest,	346.25	
2,573.33	**Abbot** Scholarship,	2,568.70	
784.63	**Alford** “	788.98	
5,458.33	**Bassett** “	5,458.33	
12,020.93	**Bigelow** “	11,950.12	
95,559.69	**Bowditch** Scholarships,	95,270.22	
2,737.50	**Browne** “	2,742.20	
7,089.35	**Class of 1802** Scholarship,	7,105.59	
3,175.30	“ **1814** “	3,154.69	
4,935.28	“ **1815** “ **(Kirkland)**,	4,964.11	
3,727.30	“ **1817** “	3,737.88	
2,644.82	“ **1835** “	2,644.26	
3,652.76	“ **1841** “	3,684.15	
2,549.85	“ **1852** “ **(Dana)**	2,693.93	
5,667.76	**Crowninshield** “	5,987.90	
5,360.57	**W. S. Eliot** “	5,363.47	
2,418.64	**Greene** “	2,435.31	
5,438.85	**Hodges** “	5,746.15	
6,034.77	**Farrar** “	6,025.73	
5,042.65	**Levina Hoar** “	5,127.58	
4,809.84	**Hollis** “	4,831.61	
974.03	**Matthews** “ (balance),	871.22	
7,883.70	**Morey** “	7,829.15	
6,369.40	**Pennoyer** “	6,565.66	
217.56	**Edward Russell** “	361.94	
4,008.42	**Saltonstall** “ (Mary & Leverett),	3,934.87	
542.59	“ “ (Dorothy),	573.27	
5,242.52	**Slade** “	5,288.75	
3,173.11	**Sever** “	3,177.38	
9,359.93	**Sewall** “	9,388.77	
33,592.49	**Shattuck** “	42,714.92	
2,750.91	**Story** “	2,756.34	
4,201.35	**Gorham Thomas** “	4,188.71	
6,390.94	**Toppan** “	6,452.03	
25,267.22	**Townsend** “	25,278.15	
3,862.67	**Walcott** “	3,880.93	
7,359.37	**Whiting** “	7,775.15	
11,467.01	Exhibitions,	11,634.26	
1,751.13	Senior Exhibition,	1,760.06	
1,200.00	**Samuel Ward** Fund,	1,200.00	
903.99	**John Glover** Fund,	955.07	
1,928.81	**Rebecca A. Perkins** Fund,	2,037.80	
10,611.61	**Quincy Tufts** Fund,	10,897.96	
	Day “	5,141.25	
	Munroe “	10,235.49	
16,261.98	**Lee** Prizes for Reading,	16,105.78	
4,381.50	**Boylston** Prizes for Elocution,	4,374.08	
11,334.86	**Bowdoin** Prizes for Dissertations,	11,525.29	
$1,485,193.17	. . . Amounts carried forward,	$1,001,003.45	506,274.82

Principal, Sept. 1, 1879.		Principal, Aug. 31, 1880.	
$1,485,193.17	. . . Amounts brought forward,	$1,001,008.45	506,274.82
988.07	**Hopkins** Gift for "Deturs,"	1,000.10	
20,509.98	Botanic Garden Fund,	22,562.45	
15,882.31	Mass. Fund for Botanic Garden,	15,882.31	
14,844.17	Herbarium Fund,	17,585.01	
125.00	Salary account (unexpended balance),	125.00	
			1,058,158.32
	LIBRARY FUNDS.		
10,519.68	Subscription for Library,	10,706.95	
2,108.30	**Bowditch** Fund,	2,084.39	
	Bright "	467.61	
5,264.45	**Denny** "	5,444.33	
5,263.22	**Farrar** "	5,271.17	
3,022.44	**Haven** "	3,180.85	
5,253.59	**Hayward** "	5,370.08	
2,351.68	**Hollis** "	2,402.80	
2,106.08	**Homer** "	2,116.78	
5,271.23	**Lane** "	5,463.03	
60,028.47	**Minot** "	62,117.78	
5,259.91	**Salisbury** "	5,286.80	
19,994.00	**Sever** "	20,214.53	
3,956.92	**Shapleigh** "	4,127.84	
33,936.13	**Sumner** "	37,708.50	
5,000.00	**Tucker** "	5,010.83	
5,259.91	**Ward** "	5,474.26	
200.56	**Wales** "	222.72	
15,831.01	**Walker** "	15,956.41	
110.21	Sundry gifts, etc. (unexpended balances),	62.25	
5.00	Sales of pamphlets, etc.		
			198,689.91
	LAW SCHOOL FUNDS.		
5,619.17	Law School (balance),	7,386.32	
15,750,00	**Dane** Professorship,	15,750.00	
23,979.82	**Bussey** "	23,979.82	
8,340.81	**Royall** "	8,340.81	
			55,456.95
	MEDICAL SCHOOL FUNDS.		
43,144.78	Medical School (balance),	53,522.32	
19,192.65	**Jackson** Medical Fund,	19,192.65	
14,836.70	**Geo. C. Shattuck** Fund,	17,129.20	
10,927.64	**Warren** Fund for Anatom'l Museum,	11,076.33	
4,252.93	**Boylston** Fund for Medical Prizes,	4,246.52	
1,939.64	" " " " Books,	2,049.25	
2,246.09	Medical Library Fund,	2,367.99	
28,779.80	Medical School Building Fund,	1,219.55	
2,000.00	**Quincy Tufts** Medical Fund,	2,000.00	
			112,803.81
$1,909,295.52	. . . . . Amounts carried forward,		$1,931,383.81

Principal, Sept. 1, 1879.		Principal, Aug. 31, 1880.	
$1,909,295.52	Amounts brought forward,		$1,931,383.81
	DIVINITY SCHOOL FUNDS.		
16,099.42	General Fund,	18,449.35	
37,583.74	**Bussey** Professorship,	37,583.74	
16,015.81	**Parkman** “	16,015.81	
6,008.43	**Hancock** “	6,008.43	
20,280.38	**Dexter** Lectureship,	20,280.38	
9,184.69	**Henry Lienow** Fund,	9,184.69	
5,250.00	**Mary P. Townsend** Fund,	5,250.00	
2,100.00	**Winthrop Ward** Fund,	2,100.00	
1,050.00	**Samuel Hoar** “	1,050.00	
1,050.00	**Abraham W. Fuller** Fund,	1,050.00	
1,050.00	**Caroline Merriam** “	1,050.00	
12,505.35	**Jackson** Foundation,	12,571.88	
2,177.95	**Joshua Clapp** Fund,	2,177.95	
1,050.00	**William Pomeroy** Fund,	1,050.00	
525.00	**Hannah C. Andrews** Fund,	525.00	
2,829.51	**J. Henry Kendall** Scholarship,	2,989.41	
2,677.21	**Nancy Kendall** “	2,688.46	
911.34	**Lewis Gould** Fund	911.34	
1,000.00	**Adams Ayer** “	1,000.00	
7,875.00	**Joseph Baker** “	7,875.00	
5,410.73	**Thomas Cary** Scholarships,	5,366.45	
2,103.51	**George Chapman** Scholarship,	2,129.05	
2,733.82	**Joshua Clapp** “	2,888.29	
1,425.38	Beneficiary money returned	1,505.89	
40,000.00	**Th. Tileston** of New York Endowm't	40,000.00	
38,030.25	Paid Subscriptions for further Endowment of Divinity School	67,438.78	
	Daniel Austin Fund,	500.00	
	Abner W. Buttrick Fund,	10,070.63	
			279,710.53
	LAWRENCE SCIENTIFIC SCHOOL FUNDS.		
38,807.17	Professorship of Engineering,	38,807.17	
2,860.50	Professorship of Chemistry,	2,860.50	
61,536,43	**Abbott Lawrence** Fund,	61,536.43	
50,000.00	**James Lawrence** “	50,000.00	
25,686.85	**John B. Barringer** “	25,686.85	
70,170.00	**Sturgis Hooper** “	69,995.00	
50,000.00	**Gray** Fund for Zoölogical Museum,	50,000.00	
297,933.10	**Agassiz Memorial** Fund, }	297,933.10	
7,594.01	Teachers' and Pupils' Fund, }	7,594.01	
117,469.34	Permanent Fund,	117,469.34	
7,740.66	**Humboldt** Fund,	7,740.66	
2,197.05	**Agassiz** Building Fund,		
			729,623.06
$2,878,218.15	Amounts carried forward,		$2,940,717.40

Principal, Sept. 1, 1879.		Principal, Aug. 31, 1880.	
$2,878,218.15	Amounts brought forward,		$2,940,717.40

OBSERVATORY FUNDS.

110,293.88	**Edward B. Phillips** Fund,	110,293.88	
21,000.00	**James Hayward** “	21,000.00	
20,673.18	**David Sears** “	21,257.19	
11,004.74	**Josiah Quincy** “	11,543.26	
2,000.00	**Charlotte Harris** “	2,000.00	
10,000.00	Anonymous Observatory Fund (at present charged with an Annuity),	10,000.00	
7,490.92	Observatory Subscriptions (balance),	8,191.87	
			184,286.20

OTHER FUNDS FOR SPECIAL PURPOSES.

413,092.80	**Bussey** Trust (income thereof, ½ to Bussey Institution, ¼ to Law School, and ¼ to Divinity School),	413,092.80	
	Bright Legacy,	50,706.25	
	Robert Troup Paine Fund,	24,104.51	
	Bussey Institution,	648.30	
5,196.15	**Bussey** Building Fund,	5,196.15	
150,419.12	**James Arnold** “	150,844.05	
2,632.08	**Arnold** Arboretum	4,973.45	
42,000.00	**James Savage** “	42,000.00	
20,466.40	**Gray** Fund for Engravings,	19,500.45	
22,542.34	**Gore** Annuity Fund,	22,915.96	
7,232.74	**Mary Osgood** Annuity Fund,	7,281.40	
13,036.92	**Lucy Osgood** Annuity Fund,	12,993.51	
51.183.31	**Bemis** Annuity Fund,	51,168.31	
2,151.07	**Gospel Church** Fund,	2,272.60	
3,171.50	**John Foster** Fund (income to Law School, Divinity School, and Medical School, in turn),	3,171.50	
85,640.24	**Sever** Hall Building Fund,	2,775.55	
969.95	Chinese Subscription (balance),		
840.00	Suspense Account,		
			813,644.79

FUNDS IN TRUST FOR PURPOSES NOT CONNECTED WITH THE COLLEGE.

16,085.68	**Daniel Williams** Fund for the conversion of the Indians,	16,069.19	
4,840.56	**Sarah Winslow** Fund, forthe Minister and Teacher at Tyngsborough, Mass.,	4,838.50	
			20,907.69
$3,902,181.73			$3,959,556.08

Changes in the Funds during the Year 1879-80.

Total amount of Funds, August 31, 1880, as before stated,	$3,959,556.08	
Total amount of Funds, September 1, 1879, as before stated,	3,902,181.73	
Showing a total increase during the year of		$57,374.35
Which is made up as follows: —		
Gifts forming new Funds or increasing old ones,	138,613.76	
Increase of Funds established during the year, and balances created during the year,	2,269.57	
Increase of specially invested Funds by gain from change of investment,	13,897.75	154,781.08
Deduct from this amount for		
Stock Account, this year's deficit charged off, being excess of expenditure over income of College, Library, and University accounts,	9,557.27	
Sever Hall Fund, the part of principal spent on building,	82,864.69	
Agassiz Building Fd. " " " " " "	2,197.05	
Robert Troup Paine Fund, part of principal spent	102.51	
Sundry balances used up	1,814.95	
Decrease more than increase of other Funds and balances, which appear both at the beginning and end of year,	870.26	97,406.73
		$57,374.35

Net Decrease of Funds and balances, as above,		97,406.73
Less increase of new Funds and balances, as above,	2,269.57	
And increase of Funds by gain from change of investment, as above,	13,897.75	16,167.32
Leaving amount of the net decrease of the Funds and balances, excluding gifts for capital account, as is also shown in the following table,		$81,239.41

Increase of Funds which appear both at the beginning and the end of the year, being the excess of income (including gifts for immediate use) over payments towards the special objects of those Funds.

Graduates' Scholarship,	705.16
Sumner Prize Fund,	81.18
Winn Professorship of Ecclesiastical History,	648.65
Gift for Pension System,	56.61
Hersey Professorship (**Thomas Lee's** gift),	892.70
Hollis " (Divinity),	1,655.17
Daniel H. Peirce Fund,	75.22
Paul Dudley Fund for Lectures,	97.63
John W. P. Abbott Fund (unrestricted),	164.19
Alford Scholarship,	4.35
Browne Scholarships,	4.70
Class of 1802 Scholarship,	16.24
" **1815** " (**Kirkland**),	28.83
" **1817** "	10.58
" **1841** "	31.39
" **1852** " (**Dana**),	144.08
Crowninshield "	320.14
W. S. Eliot "	2.90
Greene "	16.67
Hodges "	307.30
Levina Hoar "	84.93
Hollis "	21.77
Pennoyer "	196.26
Edward Russell "	19.38
Saltonstall " (**Dorothy**),	30.68
Slade "	46.23
Sever "	4.27
Sewall "	28.84
Shattuck "	769.93
Story "	5.43
Toppan "	61.09
Townsend "	10.93
Walcott "	18.26
Whiting "	415.78
Exhibitions,	167.25
Senior Exhibition,	8.93
John Glover Fund,	51.08
Rebecca A. Perkins Fund,	108.99
Quincy Tufts Fund,	286.35
Bowdoin Prizes for Dissertations,	190.43
Hopkins Gift for "Deturs,"	12.03
Herbarium Fund,	520.84
Subscription for Library,	187.27
Amount carried forward,	**$8,510.59**

Different Funds during the year 1879–80.

Decrease of Funds, which appear both at the beginning and the end of the year, being the excess of payments over income received (including gifts for immediate use) for the special objects of those Funds.

Peter C. Brooks Fund,	$1,822.42	
Thomas Cotton “	.04	
John Parker Fellowships,	1,119.38	
Harris Fellowship,	1.77	
John Thornton Kirkland Fellowship,	46.35	
Henry Flynt's Bequest,	.11	
Abbot Scholarship,	4.63	
Bigelow “	70.81	
Bowditch Scholarships,	289.47	
Class of 1814 Scholarship,	20.61	
“ **1835** “	.56	
Farrar “	9.04	
Matthews “ (balance),	102.81	
Morey “	54.55	
Saltonstall “ (**Mary & Leverett**),	73.55	
Gorham Thomas “	12.64	
Lee Prizes for Reading,	156.20	
Boylston Prizes for Elocution,	7.42	
Botanic Garden Fund,	1,112.53	
Bowditch Book Fund,	23.91	
Sundry gifts for Books (unexpended balances),	47.96	
Boylston Fund for Medical Prizes,	6.41	
Medical School Building Fund,	27,560.25	
Thomas Cary Scholarships,	44.28	
Sturgis Hooper Fund,	175.00	
Gray Fund for Engravings,	965.95	
Lucy Osgood Annuity Fund,	43.41	
Bemis Annuity Fund,	15.00	
Daniel Williams Fund,	16.49	
Sarah Winslow “	2.06	
		33,805.61

Amount carried forward, ... **$33,805.61**

Statement showing Changes in the

Amount brought forward, . .	$8,510.59	
Denny Book Fund, ...	179.88	
Farrar “ “	7.95	
Haven “ “	158.41	
Hayward “ “	116.49	
Hollis “ “	51.12	
Homer “ “	10.70	
Lane “ “	191.80	
Minot “ “	2,089.31	
Salisbury “ “	26.89	
Sever “ “	220.53	
Shapleigh “ “	170.92	
Sumner “ “	321.41	
Tucker “ “	10.83	
Ward “ “	214.85	
Wales “ “	22.16	
Walker “ “	125.40	
Law School (balance), ...	1,767.15	
Medical School (balance), ...	10,377.54	
Warren Fund for Anatomical Museum, ...	148.69	
Boylston Fund for Medical Books, ...	109.61	
Medical Library Fund, ...	121.90	
Divinity School, ...	2,349.93	
Jackson Foundation, ...	66.53	
J. H. Kendall Scholarship, ...	159.90	
Nancy “ “	11.25	
George Chapman “	25.54	
Joshua Clapp “	154.47	
Divinity School Beneficiary money returned, .	80.51	
David Sears Fund, ...	584.01	
Josiah Quincy Fund, ...	538.52	
Observatory Subscriptions (balance), ...	700.95	
James Arnold Fund, ...	424.93	
Arnold Arboretum, ...	2,341.37	
Gore Annuity Fund, ...	373.62	
Mary Osgood Annuity Fund, ...	48.66	
Gospel Church Fund, ...	121.53	
		32,935.35
Increase of Funds established during the year.		
Daniel Austin (College), ...	140.04	
Moses Day, ...	141.25	
Munroe, ...	95.49	
Abner W. Buttrick, ...	70.63	
Bright Legacy, ...	706.25	
		1,153.66
Bright Book Fund, credit balance created, ...	467.61	
Bussey Institution, “ “ “	648.30	
		1,115.91
Amount carried forward, ...		$35,204.92

Different Funds during the year 1879–80. (Continued.)

Amount brought forward,		$33,805.61
Stock Account, this year's deficit charged off,		9,557.27
Sever Hall Fund, spent on building, out of principal,		82,864.69
Agassiz Building Fund, spent on building, " " "		2,197.05
Chinese Subscription, balance spent,	969.95	
Suspense Account, " "	840.00	
Sales of pamphlets, etc.,	5.00	
		1,814.95
Decrease of **Robert Troup Paine** Fund,		102.51

Amount carried forward, ... $130,342.08

Amount brought forward, ...		$35,204.92
Shattuck Scholarships, gain from change of investment,	8,352.50	
" Medical Fund, " " " " "	2,292.50	
Sumner Book Fund, " " " " "	1,032.75	
Herbarium Fund, " " " " "	2,220.00	
		13,897.75
		49,102.67
Balance, which is the net decrease of the Funds for the year 1879-80, apart from gifts for capital account, ...		81,239.41
Total, ...		$130,342.08

Different Funds during the year 1879–80. (Continued.)

Amount brought forward, ...	**$180,842.08**
Total, ...	**$180,842.08**

The following tables are not found, in their present form, in the Treasurer's books. They are intended to exhibit with some detail the resources and the expenditures of each department of the University. The income of every fund held by the University is given in these tables, and also the sum paid out for the specific object of each and every fund, in case that sum be either less or more than the actual income of the fund. If the object to which the income of a fund is to be applied be a general one, — like salaries, for example,— no separate mention is made in these tables of that appropriation. That particular payment is merged with others of the same kind under the general heading. A balanced summary of these tables will be found on page 52.

TABLE No. I.

THE UNIVERSITY.

RECEIPTS.

Income of the unappropriated fund heretofore called the Stock Account,	$9,073.90	
Income of the following funds: —		
Insurance and Guaranty,	8,531.61	
Israel Munson,	889.88	
Leonard Jarvis,	959.08	
Samuel D. Bradford,	296.63	
Peter C. Brooks,	184.08	
Thomas Cotton,	8.31	
Parker Fellowship,	3,280.62	
John Thornton Kirkland Fellowship,	703.65	
Harris Fellowship,	598.22	
Graduates Scholarship,	1,505.16	
Sumner Prize,	81.13	
Winn Professorship,	2,448.65	
Sever,	1,130.00	
Gift for Pension System,	56.61	
		29,747.53
From resident graduates for the use of the Library,		45.00
For the degrees of A.M. and Ph.D.,		330.00
For care of the Sarah Winslow Fund,		6.88
Balance remaining after dividing the net income among the Funds,		179.53
For use of Sanders Theatre by societies,		133.47
		$30,442.41

PAYMENTS.

Overseers' Expenses.		
Advertising,	$146.10	
Printing President's Annual Report,	406.82	
Printing Treasurer's " "	102.71	
Printing other reports, &c.,	89.01	744.64
Office Expenses.		
President's	89.68	
Treasurer's	140.78	
Bursar's	565.48	
Corporation Rooms (fuel, rent, &c.),	1,690.00	
		2,485.94
Amount carried forward,		$3,230.58

TABLE I., CONTINUED.

PAYMENTS.

Amount brought forward, ...			$3,230.58
Salaries.			
President, ...		$5,008.35	
Treasurer, ...		4,000.00	
Secretary of the Board of Overseers, ...		100.00	
Bursar, ...		3,000.00	
Bursar's Assistant, ...		1,000.00	
Secretary at Cambridge, ...		1,800.00	
For keeping Treasurer's books and copying records and other papers, ...		2,800.00	
Superintendent of Buildings, ...		1,500.00	
			19,208.35
For Salary of Lecturer on Ecclesiastical History (from Winn Fund), ...			1,800.00
Fellowships.			
John Parker, ...		4,400.00	
Harris, ...		599.99	
John Thornton Kirkland, ...		750.00	
Graduates Scholarship, ...		800.00	
			6,549.99
Memorial Hall and Sanders Theatre.			
Repairs, fuel, gas, &c., ...		1,074.76	
Insurance, ...		332.50	
			1,407.26
Sundries.			
Advertising, ...		78.01	
Diplomas, ...		25.93	
Labor, &c. on grounds outside of College Yard,		1,253.36	
Repairs and improvements on the President's house,		2,006.50	
Subscription to Mercantile Agency, ...		125.00	
Watering streets, ...		205.00	
Watchman, ...		494.25	
Examinations at Chicago and Cincinnati, . . .		192.07	
Repairing Watchman's clock, ...		7.51	
Rent of Safe, ...		110.00	
Catalogue (extra pages), ...		86.80	
Legal services, ...		25.00	
Printing, ...		12.00	
Fire escapes and fire covers, ...		300.66	
Chemical engine, ...		3,000.00	
Reception of American Association for the Advancement of Science, ...		797.59	
Harvard Register, ...		300.00	
Quinquennial Catalogue,			
Editing and printing (part), . .	$1,728.87		
Less catalogues sold, ...	635.00	1,093.87	
			10,113.55
			$42,309.73

TABLE No. II.

THE COLLEGE.

RECEIPTS.

From Term Bills.			
Instruction,		$122,835.00	
Rents available for general expenses,		32,974.19	
Diplomas,		407.50	156,216.69
Income of Scholarship Funds.			
Abbot,		$145.37	
Alford,		44.35	
Bassett. From special investment,		275.00	
Bigelow,		679.19	
Bowditch. Interest,	$1,444.14		
From special investment,	3,500.00	4,944.14	
Browne,		154.70	
Class of 1802,		400.53	
" **1814,**		179.39	
" **1815 (Kirkland),**		278.83	
" **1817,**		210.58	
" **1835,**		149.44	
" **1841,**		206.39	
" **1852 (Dana)** (accumulating),		144.08	
Crowninshield (accumulating),		320.14	
Wm. Samuel Eliot,		302.90	
Farrar,		340.96	
Greene,		186.67	
Levina Hoar (Town of Lincoln),		284.93	
Hodges (accumulating),		307.30	
Hollis,		271.77	
Matthews (½ of net rents of Hall),		5,097.19	
Morey,		445.45	
Pennoyer. Interest,	$108.76		
Annuity,	277.50	386.26	
Edward Russell (accumulating),		19.38	
Saltonstall, Mary and Leverett,		226.45	
Saltonstall, Dorothy (accumulating),		30.68	
Savage,		300.00	
Sever,		179.27	
Sewall,		528.84	
Shattuck. Interest,	$2,019.93		
From special investment,	400.00	2,419.93	
Slade,		296.23	
Story,		155.43	
Gorham Thomas,		287.36	
Toppan,		361.09	
Townsend,		1,427.59	
Walcott,		218.26	
Whiting (accumulating),		415.78	22,521.85
Received from the Trustees of the **Thayer** Scholarships,			3,600.00
Amount carried forward,			$182,338.54

TABLE II., CONTINUED.

RECEIPTS.

Amount brought forward, ...			$182,338.54
Other Beneficiary Funds, income of.			
"Exhibitions," Interest, ...	$647.89		
Returned by beneficiaries,	220.00	$867.89	
Senior "Exhibition,"		98.93	
Samuel Ward, ...		50.00	
John Glover (accumulating), ...		51.08	
Rebecca A. Perkins "		108.99	
Quincy Tufts, ...		599.58	
Moses Day, ...		141.25	
Munroe, ...		95.49	2,013.21
Prize Funds, income of.			
Thomas Lee Prizes for Reading, ...		918.80	
Ward Nicholas Boylston Prizes for Elocution,		247.58	
James Bowdoin Prizes for Dissertations, . . .		640.43	
Edward Hopkins Gift for "Deturs,"		286.14	2,092.95
Funds for Instruction.			
Income of the Alford Professorship, ...		1,567.82	
Boylston "		1,601.04	
Eliot "		1,221.53	
J. Phillips's addition to Eliot Prof.,		550.00	
Erving Professorship, ...		197.75	
Fisher "		2,033.49	
Hersey "		698.10	
Hollis " (Mathematics), . .		211.69	
McLean "		2,433.06	
Perkins "		1,186.50	
Plummer "		1,413.63	
Pope "		2,966.25	
Rumford "		3,009.21	
Smith "		1,307.41	
Fund for Permanent Tutors, . . .		917.56	
Thos. Lee Fund for the Hersey Prof.		892.70	
Class Subscription, ...		7,062.50	
Henry Flynt, ...		18.53	
Hollis Prof. of Divinity (accumulat'g),		1,655.17	
Paul Dudley Fund for Lectures, "		97.63	
Anonymous gifts, to increase salaries, ...		1,000.00	32,041.57
Botanic Garden.			
Income of accumulated income, ...		228.20	
" " investment of the Garden Fund, . .		1,020.00	
" " the Massachusetts Fund, ...		897.33	
Estimated value of use of house by Prof. Gray,		1,000.00	
Gifts for present use, ...		1,500.00	4,645.53
Herbarium. Income of accumulated income, ...		705.35	
From special investment (6 months), . .		480.00	
Gifts for immediate use, ...		583.70	
Sale of duplicates, etc., ...		18.00	1,787.05
Amount carried forward, ...			$224,918.58

TABLE II., CONTINUED.

RECEIPTS.

Amount brought forward, ...		$224,918.85
Income of Jonathan Phillips's unrestricted Fund,	$1,779.75	
" " John A. Blanchard's " "	59.33	
" " Daniel Austin's " "	140.04	
" " Daniel H. Pierce Fund, ...	752.26	
" " J. W. P. Abbot's " (accumulating),	164.19	
		2,895.57
Sundries.		
Pew Rents, Appleton Chapel, ...	$183.00	
For the Degree of Bachelor of Arts out of course, and examination fees, ...	196.75	
Sales of wood, grass, &c., ...	518.72	
For Printing by College Press for other departm'ts,	717.70	
For use of rooms by College officers, ...	537.50	
Sale of tickets to Commencement Dinner of 1880,	519.00	
Gift for apparatus for Gymnasium, ...	3,000.00	
Gift for boiler for Botanic Lecture room, . . .	300.00	
For use of lockers at Gymnasium, ...	1,237.50	
From Insurance Co.'s for fires in Stoughton and Hollis Halls, ...	1,865.00	9,075.17
Total receipts, ...		$236,889.59

PAYMENTS.

Paid the incumbents of the following Scholarships.	
Abbot, ...	$150.00
Alford, ...	40.00
Basset, ...	275.00
Bigelow, ...	750.00
Bowditch, ...	5,233.61
Browne, ...	150.00
Class of 1802, ...	250.00
" 1814, ...	200.00
" 1815 (Kirkland), ...	250.00
" 1817, ...	200.00
" 1835, ...	150.00
" 1841, ...	175.00
Wm. Samuel Eliot, ...	300.00
Farrar, ...	350.00
Greene, ...	120.00
Levina Hoar, ...	200.00
Hollis,.	250.00
Matthews, ...	5,200.00
Morey, ...	500.00
Pennoyer, ...	190.00
Saltonstall, Mary and Leverett, ...	300.00
Savage, ...	300.00
Amount carried forward,	$15,533.61

TABLE II., CONTINUED.

PAYMENTS.

Amount brought forward,	$15,533.61	
Sever,	175.00	
Sewall,	500.00	
Shattuck,	1,650.00	
Slade,	250.00	
Story,	150.00	
Thayer,	3,600.00	
Gorham Thomas,	250.00	
Toppan,	300.00	
Townsend,	1,416.66	
Walcott,	200.00	
		24,025.27
Paid other Beneficiaries.		
Exhibitions,	700.64	
Senior Exhibition	90.00	
Samuel Ward Income,	50.00	
Quincy Tufts " (part of),	313.23	
		1,153.87
Prizes. **Lee** Prizes for Reading,	275.00	
Boylston Prizes for Elocution,	255.00	
Bowdoin Prizes for Dissertations	450.00	
"Deturs" from **Hopkins** Fund	274.11	
		1,254.11
Salaries for instruction,		133,991.87
Repairs and improvements on College Edifices not valued on Treasurer's books,		7,723.89
Insurance on College Edifices, etc. not valued on Treasurer's books,		846.68
Botanic Garden, for labor, repairs, and materials,		5,758.06
Herbarium, " " "		1,266.21
Gymnasium, Locker money, paid Director,	1,237.50	
Wages,	984.01	
Gas regulator,	150.00	
Gas, water, cleaning, and sundries,	592.40	
Fuel,	378.00	
Apparatus and fittings,	4,789.23	
Insurance,	60.00	
		8,191.14

General Expenses.

Appropriations for collections and laboratories.

Physical Apparatus (Prof. Lovering),	$600.00
Mineral and Chemical (Prof. Cooke),	800.00
Rumford (Prof. Gibbs),	152.73
Botanical (Prof. Farlow),	350.00
Physiological (Asst. Prof. James),	11.26
Geological (Prof. Shaler),	214.78
Zoölogical (Instructors Faxon and Mark),	15.10
Fine Arts (Prof. Norton),	266.10
Amounts carried forward,	$2,409.97

Amounts carried forward,	$2,409.97	$183,711.05

TABLE II., CONTINUED.

PAYMENTS.

Amounts brought forward,	$2,409.97		$183,711.05
Physical (Prof. Trowbridge),	287.57		
Drawing (Instructor Moore),	67.73		
Biological (Prof. Farlow and Inst. Faxon),	34.74		
		$2,800.01	
Appleton Chapel. Singing, blowing organ, etc.,		496.34	
Blackboards,		19.80	
Books and binding,		133.85	
Clerk in Chemical Laboratory,		263.99	
Cleaning and care of College buildings not valued on Treasurer's books,		305.25	
College yard expenses.			
Labor and material,	$2,987.70		
Manure,	17.46		
Tools, etc.,	11.60		
		$3,016.76	
Commencement Dinner 1880,		973.82	
Dean's and Registrar's Office, clerk, stationery, postage, copying, etc.,		1,284.86	
Diplomas,		176.18	
Fire ladder,		158.50	
Fuel,		1,685.58	
Furniture,		147.41	
Freight,		105.34	
Gas,		1,261.44	
Incidentals,		64.80	
Janitors,		6,255.78	
Mats,		37.50	
Music, Class-Day,		125.00	
Pews hired in Cambridge churches,		927.00	
Printing,		393.22	
Printing office, expenses,		2,577.02	
Safe,		506.00	
Services of examiners and proctors,		3,318.25	
" " undergraduates,		572.00	
Watchman,		900.00	
Water rates,		325.52	
			28,831.17
Total payments,			$212,542.22

TABLE No. III.

THE LIBRARY.

RECEIPTS.

Income of the following Funds for the purchase of books.			
Subscription for Library,		$594.38	
Nathaniel I. Bowditch,		119.10	
Bright, ½ income of the **Bright** Legacy,		706.25	
Denny,		297.42	
Eliza Farrar,		297.36	
Horace A. Haven,		170.74	
George Hayward,		296.85	
Thomas Hollis,		132.89	
Sidney Homer,		118.99	
Frederick A. Lane,		297.81	
Charles Minot. Interest,	$1.58		
From special investment,	4,200.00	4,201.58	
Stephen Salisbury,		297.19	
Sever,		1,129.66	
Samuel Shapleigh,		223.57	
Charles Sumner,		1,946.99	
Ichabod Tucker. From special investment,		200.00	
Thomas W. Ward,		297.19	
George W. Wales. Gift,	$200.00		
Interest on unexpended balance,	11.36	211.36	
James Walker,		894.45	
Repayment for books belonging to **Gray Fund,**		65.78	
			12,499.51
James Savage Fund for general expenses (½ of income),			1,036.50
Fines,			7.50
William B. Weeden, gift to aid in publishing Library Bulletins,			100.00
Repayment from **Robert Troup Paine Fund** for moving books from New York,			55.26
Fees for use of Library,			95.00
			$13,793.77

PAYMENTS.

For Books from	
Subscription Fund,	$407.11
Bowditch "	143.01
Bright "	238.64
Denny "	117.54
Farrar "	289.41
Gray "	23.64
Haven "	12.33
Hayward "	180.36
Hollis "	81.77
Homer "	108.29
Lane "	106.01
Amount carried forward,	$1,708.11

TABLE III., CONTINUED.

PAYMENTS.

Amount brought forward, ...	$1,708.11	
Minot Fund, ...	2,112.27	
Salisbury "	270.80	
Sever "	909.13	
Shapleigh "	52.65	
Sumner "	1,625.58	
Tucker "	189.17	
Ward "	82.34	
Wales "	189.20	
Walker "	769.05	
Anonymous gift, ...	97.55	
Money from Fines, ...	5.00	
		8,010.85
Salaries and wages, ...	15,256.09	
Binding, ...	1,255.83	
Stationery and postage, ...	470.54	
Fuel, ...	458.83	
Repairs and improvements, ...	586.47	
Freight, ...	135.42	
Cleaning, ...	386.37	
Printing, ...	161.00	
Furniture, ...	17.25	
Insurance on steam boiler, ...	15.00	
Incidentals, ...	16.88	
Water rates, ...	54.64	
Repairing maps, ...	26.25	
Bulletins, ...	511.51	
Mats, ...	42.50	
		19,394.58
		$27,405.43

TABLE No. IV.

DIVINITY SCHOOL.

RECEIPTS.

Income of the following Funds applicable to Salaries.

General Fund, ...	$909.59
Benjamin Bussey Professorship, ...	2,123.50
Parkman Professorship, ...	904.90
John Hancock "	339.45
Samuel Dexter, ...	1,145.82
Henry Lienow, ...	518.95
Mary P. Townsend, ...	296.63
Winthrop Ward, ...	118.65
Amount carried forward, ...	$6,357.49

TABLE IV., CONTINUED.

RECEIPTS.

Amount brought forward, . . .	$6,357.49	
Samuel Hoar, ...	59.33	
Abraham W. Fuller, ...	59.33	
Caroline Merriam, ...	59.33	
Joseph Baker, ...	444.94	
Thomas Tileston of New York Endowment, .	2,260.00	
New Subscription, ...	2,933.71	12,174.18
Income of Scholarship Funds.		
Thomas Cary, ...	305.72	
George Chapman, ...	118.88	
Joshua Clapp, ...	154.47	
Jackson Foundation, ...	706.53	
J. Henry Kendall, ...	159.90	
Nancy Kendall, ...	151.25	1,596.75
Income of other Funds.		
Joshua Clapp, ...	123.06	
William Pomeroy, ...	59.33	
Hannah C. Andrews, ...	29.66	
Lewis Gould, ...	51.47	
Daniel Austin, ...	11.75	
Abner W. Buttrick, ...	70.68	
John Foster, income for Divinity students every third year, ...	179.22	
Interest on Beneficiary money returned, ...	80.51	605.68
Term Bills.		
For Instruction, ...	1,116.67	
For Rents and Furniture, ...	1,409.14	2,525.81
Benjamin Bussey Trust. One-fourth of net income for use of this School, ...		1,752.64
Divinity Boarding Club, balance, ...		279.07
		$18,934.03

PAYMENTS.

For Salaries for Instruction, ...	$13,125.00	
Services of students, ...	250.00	
Labor, repairs, and improvements, ...	272.00	
Cleaning and care of rooms, ...	262.68	
Books, ...	200.00	
Printing, ...	26.40	
Fuel, ...	100.91	
Gas, ...	85.02	
Stationery and postage, ...	50.20	
Water rates, ...	38.00	
Diplomas, ...	7.64	
Collation, ...	75.00	
Mats, ...	65.06	
Expenses collecting and soliciting subscriptions, . .	278.30	14,836.21
Amount carried forward, ...		$14,836.21

TABLE IV., CONTINUED.

PAYMENTS.

Amount brought forward,		$14,836.21
Paid the incumbents of the following Scholarships.		
Jackson Foundation,	$640.00	
Cary,	350.00	
Chapman,	93.34	
Nancy Kendall,	140.00	
		1,223.34
		$16,059.55

TABLE NO. V.

LAW SCHOOL.

RECEIPTS.

Income of the following funds.		
Law School Balance,	$317.47	
Nathan Dane,	889.88	
Benjamin Bussey Professorship,	1,354.67	
Isaac Royall,	471.49	
Benjamin Bussey Trust (½ of net income for use of this School),	1,752.64	
		4,786.15
Term Bills.		
For instruction,	23,700.00	
For repairs,	1.24	
		23,701.24
For books sold from Library,		741.00
		$29,228.39

PAYMENTS.

For Salaries for Instruction,	$18,750.00	
Librarian and Assistants,	2,605.00	
Janitor and coat-room boy,	670.00	
Books,	2,586.03	
Binding,	336.81	
Diplomas,	21.13	
Fuel,	313.82	
Gas,	321.36	
Printing	170.25	
Scholarships,	1,200.00	
Labor, repairs, and improvements,	184.07	
Stationery and postage,	80.95	
Insurance,	100.00	
Freight,	35.00	
Sundries,	18.00	
Water rates,	39.22	
Mats,	29.60	
		$27,461.24

Table No. VI.

MEDICAL SCHOOL.

RECEIPTS.

Income of the following Funds.			
Medical School, balance,		$2,437.69	
Jackson Medical,		1,084.40	
Warren, for Anatomical Museum,		617.43	
Ward Nicholas Boylston, for Medical Prizes,		240.29	
Ward Nicholas Boylston, for Medical Books,		109.61	
George C. Shattuck. Interest,	$749.02		
From special investment,	280.00	1,029.02	
Hersey Professorship, two-fifths income of the fund,		444.16	
Medical Library Fund,		126.90	
Medical School Building Fund,		1,219.55	
Quincy Tufts,		113.00	
			7,422.05
From students for instruction,		48,721.07	
" " for graduation fees,		1,350.00	
" " in Chemical Laboratory, breakage and chemicals,		1,468.89	
" " in Practical Anatomy, for material,		445.75	
			51,985.71
Returned by Beneficiary,			85.00
Cash from Treasurer of Building Fund,			54,545.20
			$114,037.96

PAYMENTS.

Boylston Medical Prizes. Prizes,	$146.70		
Advertising,	100.00	246.70	
Warren Anatomical Museum.			
Expenses, and additions to collection,		468.74	
Chemical Laboratory, apparatus, chemicals, and wages,		1,932.37	
Physiological Laboratory, expenses and wages,		805.00	
Operative Surgery, diagrams and instruments,		304.69	
Practical Anatomy and Surgery Expenses,		2,094.34	
Microscopes,		412.13	
Microscopy Expenses,		39.67	
Obstetrics "		297.67	
Histology "		27.20	
Materia Medica " (2 years)		125.00	
Salaries for instruction,		31,789.16	
Repairs and improvements,		1,993.99	
Scholarships,		800.00	
Cost of land for new building,		83,325.00	
Sets of bones,		193.02	
			124,804.68
Amount carried forward,			$124,804.68

TABLE VI., CONTINUED.

PAYMENTS.

Amount brought forward, ...		$124,804.68
General Expenses.		
Advertising and catalogues, ...	$957.78	
Alcohol, ...	41.10	
Books from Library Fund, ...	5.00	
Cleaning, ...	240.87	
Clerk, ...	700.00	
Diplomas, ...	75.72	
Doorkeeper, ...	82.00	
Faculty meetings, (2 years)	88.34	
Fuel, ...	412.69	
Furniture, ...	393.29	
Gas, ...	505.00	
Janitor, ...	1,200.00	
Legal Services, ...	15.00	
Librarian, ...	20.00	
Mats, ...	8.05	
Printing, ...	103.50	
Rent of rooms (in part) for Pathological specimens,	200.00	
Rent and heating of rooms for Chemical Laboratory,	700.00	
Services of Examiners, ...	55.00	
Stationery, postage, and sundries, ...	96.16	
Water rates, ...	142.70	6,042.20
		$130,846.88

TABLE No. VII.

DENTAL SCHOOL.

RECEIPTS.

From Students, ...	$2,142.98	
Infirmary, ...	371.01	
Laboratory, ...	211.29	
Rent of a part of the School building, ...	292.50	
		$3,017.78

PAYMENTS.

Advertising and catalogues, ...	$118.63	
Care of operating room at hospital, ...	40.00	
Drugs, chemicals, and sundries, ...	48.35	
Diplomas, ...	8.58	
Fuel, ...	104.20	
Gas, ...	10.80	
Gold foil and metals, ...	113.37	
Instruments and apparatus, ...	47.56	
Interest on debt, ...	932.61	
Printing, ...	81.50	
Repairs to building, ...	12.50	
Repairs to Furniture, ...	95.50	
Salaries for instruction, ...	1,005.50	
Stationery and postage, ...	42.55	
Taxes, ...	100.00	
Water rates, ...	11.50	$2,773.15

Table No. VIII.

LAWRENCE SCIENTIFIC SCHOOL.

RECEIPTS.

Income of the following Funds.			
Professorship of Engineering,		$2,192.60	
Professorship of Chemistry,		161.65	
Abbott Lawrence,		3,476.78	
James Lawrence. From special investment,		3,000.00	
John B. Barringer. Interest,	$1,327.02		
From special investment,	200.00	1,527.02	
Gray Fund for Zoölogical Museum.			
From special investment,		2,193.75	
Sturgis Hooper. Interest,		2,825.00	
Agassiz Memorial. Interest,	$16,098.71		
From special investment,	820.28	16,918.99	
Teachers and Pupils,		429.06	
Humboldt,		437.37	
Permanent Fund for Museum of Zoölogy,		6,637.00	
Agassiz Building Fund,		124.13	
			39,923.35
Advances by Alexander Agassiz, Esq., to the Building Fund,			6,559.50
Term Bills, for Instruction,			2,505.00
			$48,987.85

PAYMENTS.

Paid on the order of the Faculty of the Museum of Comparative Zoölogy, from the following Funds.		
Gray,	$2,193.75	
Agassiz Memorial,	10,523.31	
Teachers and Pupils,	429.06	
Humboldt,	437.37	
Permanent,	6,637.00	
Agassiz Building Fund,	15,276.36	
		35,496.85
Salaries for instruction,	13,176.78	
Books, Engineering Department,	100.00	
Instruments and apparatus,	36.24	
Printing,	28.50	
Fuel,	228.75	
Gas,	20.54	
Janitor,	480.00	
Labor and repairs,	68.41	
Expenses Chemical Laboratory (part),	227.02	
Scholarships,	150.00	
Interest on advances,	515.14	
Diplomas,	.50	
Water rates,	192.00	
		15,223.88
		$50,720.73

TABLE No. IX.

OBSERVATORY.

RECEIPTS.

Income of the following Funds.		
Observatory, balance,	$423.24	
Edward B. Phillips,	6,231.61	
James Hayward,	1,186.50	
David Sears,	1,168.02	
Josiah Quincy,	621.78	
James Savage (½ of net income),	1,036.50	
Charlotte Harris,	113.00	
		10,780.65
Subscriptions, paid,		4,330.00
From sale of time signals,	2,942.50	
" " " grass,	36.00	
" " " Annals,	49.01	
		3,027.51
		$18,138.16

PAYMENTS.

Salaries and wages,	$11,172.66	
Cleaning and care of Observatory,	284.39	
Gas,	93.08	
Instruments and apparatus, including repairs on same,	220.17	
Repairs and improvements on buildings and grounds,	1,112.79	
Stationery and postage,	333.82	
Fuel,	31.50	
Books,	198.18	
Binding,	104.14	
Water rates,	20.00	
Printing,	143.99	
Expenses of time service for 1879-80,	1,306.44	
Freight,	78.71	
Trustees for Mrs. Winlock, ½ net income from sale of time signals,	818.03	
Chemicals and sundries,	44.00	
Watering streets,	22.50	
Furniture,	183.28	
Observatory Annals,	147.00	
		$16,314.68

TABLE No. X.

BUSSEY INSTITUTION.

RECEIPTS.

From **Bussey** Trust (½ net income),	$3,505.30	
From **Bussey** Building Fund (net income),	793.57	
Fees for Instruction,	868.00	
Sale of coal to Arboretum,	65.52	
From **Arnold** Arboretum for rent of greenhouses,	50.00	
Gifts to increase salaries,	950.00	
Gifts for the purchase of books,	7.60	$6,239.99

TABLE X., CONTINUED.

PAYMENTS.

For Salaries,	$4,450.00	
Books,	46.48	
Stationery and postage, cleaning, gas, &c.,	78.30	
Fuel,	88.75	
Wages,	181.40	
Horticultural Department, expenses,	513.88	
Repairs and improvements,	178.88	
Insurance,	54.00	
		$5,591.69

Bussey Building Fund.

Receipts.

Income of unexpended balance of Fund,	$293.57	
Estimated value of use of house by Prof. Storer,	500.00	
		$793.57

Payments.

Income carried to Bussey Institution,	$793.57

James Arnold Fund.

Receipts.

Income of Fund,	$8,498.67

Payments.

19/20 of income carried to Arnold Arboretum,	$8,073.74

Arnold Arboretum.

Receipts.

Income of unexpended balance of Fund,	$148.61	
From James Arnold Fund,	8,073.74	
		$8,222.35

Payments.

Salary of Director,	$2,500.00	
Expenses of Arboretum,	3,380.98	
		$5,880.98

TABLE NO XI.

MISCELLANEOUS FUNDS.

Bussey Trust.

Receipts.

Net income from Real Estate,	$13,910.58

Payments.

Annuities,	$6,900.00	
One-half of the remaining income to Bussey Institution,	3,505.30	
One-quarter " " " Divinity School,	1,752.64	
" " " " " Law School,	1,752.64	
		$13,910.58

Gray Fund for Engravings.

Receipts.

Income from special investment,	$750.00	
Interest on balance of Fund,	282.50	
From sale of catalogues,	37.00	
		$1,069.50

Payments.

To the Treasurer of the Museum of Fine Arts,	$950.00	
For book of Engravings from accumulated income,	1,085.45	
		$2,035.45

Annuity Funds.

Receipts.

Gore, income,	$1,273.62	
Mary Osgood, income,	408.66	
Lucy Osgood, income,	736.59	
Anonymous Observatory, income,	720.00	
Bemis, income,	2,825.00	
		$5,963.87

Payments.

Gore, annuities,	$900.00	
Mary Osgood, annuity,	360.00	
Lucy Osgood, annuities,	780.00	
Anonymous Observatory, annuity,	720.00	
Bemis, annuity,	2,840.00	
		$5,600.00

Daniel Williams Fund.

Receipts.

Interest on Fund,		$908.86

Payments.

Treasurer of Herring Pond Indians,	$308.45	
" " Mashpee Indians,	616.90	
		$925.35

Sarah Winslow Fund.

Receipts.

Interest on Fund,		$273.48

Payments.

Minister at Tyngsborough, Mass.,	$134.33	
Teacher at " "	134.33	
Commission on income credited to University,	6.88	
		$275.54

James Savage Fund.

Receipts.

Interest on Fund,		$2,373.00

Payments.

Scholarship,	$300.00	
One-half the remaining income to Library,	1,036.50	
" " " " Observatory,	1,036.50	
		$2,373.00

Gospel Church Fund (accumulating). Interest on Fund, . . . $121.53

TABLE XI., CONTINUED.

Bright Legacy.

Receipts.

Interest on Fund,	$1,412.50

Payments.

One-half income to **Bright** Book Fund,	$706.25

Suspense Account.

Payments.

To Bussey Institution, for salary of Demonstrator of Zoölogy,	$150.00	
To subscribers to a Pension system, returned by vote of Corporation,	690.00	$840.00

Sever Hall Building Fund.

Receipts.

Income from special investment,	$3,390.43

Payments.

On account of Architectural services, contracts for building, and insurance,	$85.178.20	
Net Interest charged on advances,	1,076.92	$86,255.12

Insurance and Guaranty Fund.

Receipts.

Gain on sale of $100,000 Phil., Wilm. & Balt. R. R. Bds.,	$9,250.00	
“ “ “ “ 16,000 Chicago, Burl. & Quincy “ “	1,800.00	
“ “ “ “ 240 sh. Chic., Burl. & Quincy R. R. Stock,	6,175.33	$17,225.33

Payments.

Loss on sale of $185,000 United States 5% Bonds,	$365.63	
Net gain on sales carried to account of unoccupied lands, to charge off in part the cost of that unproductive investment,	16,859.70	$17,225.33

Sundry Accounts.

Receipts.

Gain from change of investment for Shattuck Schol. Fd.,	$8,352.50	
“ “ “ “ “ “ “ Medical “	2,292.50	
“ “ “ “ “ “ Sumner Book “	1,032.75	
“ “ “ “ “ “ Herbarium “	2,220.00	
Chinese Subscriptions paid and fee for instruction,	2,780.67	
Advances to Chinese Instruction from “ General Investments,”	311.53	
		$16,989.95

Payments.

Expenses of Chinese Instruction, salary, and travelling expenses,	$4,062.15	
Annuity for Class of 1802,	134.29	
Robert Troup Paine Fund, expenses,	102.51	
Advances to Dental School, repaid,	244.63	
“ “ Lawrence Scientific School, repaid,	639.17	$5,182.75

GENERAL SUMMARY OF THE TABLES.

			Receipts.	Payments.
Table	I.	University,	30,442.41	42,309.73
Table	II.	College,	236,889.59	212,542.22
Table	III.	Library,	13,793.77	27,405.43
Table	IV.	Divinity School,	18,934.08	16,059.55
Table	V.	Law School,	29,228.39	27,461.24
Table	VI.	Medical School,	114,037.96	130,846.88
Table	VII.	Dental School,	3,017.73	2,773.15
Table	VIII.	Lawrence Scientific School,	48,987.85	50,720.73
Table	IX.	Observatory,	18,138.16	16,314.68
Table	X.	Bussey Institution,	6,239.99	5,591.69
		Bussey Building Fund,	793.57	793.57
		James Arnold Fund,	8,498.67	8,073.74
		Arnold Arboretum,	8,222.35	5,830.98
Table	XI.	Bussey Trust,	13,910.58	13,910.58
		Gray Fund for Engravings,	1,069.50	2,085.45
		Annuity Funds,	5,963.87	5,600.00
		Daniel Williams Fund,	908.86	925.35
		Sarah Winslow Fund,	273.48	275.54
		James Savage Fund,	2,373.00	2,373.00
		Gospel Church Fund,	121.53	
		Suspense Account,		840.00
		Insurance and Guaranty Fund,	17,225.33	17,225.33
		Sundry Accounts,	16,989.95	5,182.75
		Sever Hall Building Fund,	3,390.43	86,255.12
		Bright Legacy,	1,412.50	706.25
			600,863.55	682,102.96
				600,863.55
			Balance	$81,239.41

Which is the net decrease of the Funds and balances, excluding gifts for capital account, as also shown on page 27.

Certificate of the Joint Committee of the Corporation and Overseers of Harvard College, for examining the Books and Accounts of the Treasurer entered in the Journal kept by him.

We, the undersigned, a joint committee of the Corporation and Overseers of Harvard College to examine the books and accounts of the Treasurer for the year ending August 31, 1880, have examined and audited the Cash book from pages 40 to 81, inclusive, and have seen that all the bonds, notes, mortgages, certificates of stock, and other evidences of property, which were received by him and on hand at the beginning of said year, are now in his possession, or are fully accounted for by entries made therein. We have also noticed all payments, both of principal and interest, indorsed on any of said bonds or notes, and have seen that the amounts so indorsed have been duly credited to the College.

We have carefully examined all notes, bonds, mortgages, and other securities invested during the said year, and are of opinion that all such investments have been judiciously made and are amply secured.

We have in like manner satisfied ourselves that all the entries for moneys expended by the Treasurer, or charged in his books to the College, are well vouched; such of them as are not supported by counter entries being proved by regular vouchers and receipts.

The Committee have also seen that all the entries for said year are duly transferred to the Ledger, and that the accounts there are rightly cast, and the balances carried forward correctly to new accounts.

(Signed,)

MARTIN BRIMMER,	*Committee on the part of the Corporation.*
JOHN QUINCY ADAMS,	
LEVERETT SALTONSTALL,	*Committee on the part of the Board of Overseers.*
AMOS A. LAWRENCE,	
HENRY LEE,	
NATHANIEL SILSBEE,	
ISRAEL M. SPELMAN,	
GEORGE B. CHASE,	

Boston, Dec. 21, 1880.